71-23,841

PALMER, Adrian Shuford, 1940-
THE EZAFE CONSTRUCTION IN MODERN STANDARD PERSIAN.

The University of Michigan, Ph.D., 1971
Language and Literature, linguistics

University Microfilms, A XEROX Company, Ann Arbor, Michigan

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THE EZAFE CONSTRUCTION IN MODERN STANDARD PERSIAN

by
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A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
(Linguistics)
in The University of Michigan
1971

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ABSTRACT

THE EZAFE CONSTRUCTION IN MODERN
STANDARD PERSIAN

by
Adrian Shuford Palmer

Chairman: Herbert H. Paper

The purpose of this study is to investigate the syntax of the "ezafe" construction. The ezafe construction is studied both in terms of the ways it is paraphrased within Persian, and also in terms of formal rules.

I attempted to account for ezafe constructions and their paraphrases by formulating rules within the theoretical framework of case grammar as defined by Charles Fillmore. Paraphrase relationships are explained by showing that related constructions have similar deep structures, and that surface structure differences can be predicted by transformational rules.

Testing several versions of the rules led to additional consultation with informants, during the course of which new examples were often elicited. The examples that finally appear in my analysis are primarily obtained from these discussions. Some of the examples are suggested by Fillmore's work on English grammar.

Within the set of ezafe constructions treated, there are shown to be two distinct subsets. One of these contains no conjugated verb in the proposed deep structure. These constructions contain either

the verb /dašt-/ 'have' or /bud-/ 'be' in their sentence paraphrases. The introduction of these verbs is explained by the transformational rules. The second subset of ezafe constructions contains an infinitive. These constructions have a conjugated verb in their deep structure and sentence paraphrases. The introduction of the infinitive into the ezafe construction is also accounted for by the transformational rules.

The ezafe morpheme is shown to be in complementary distribution with the relative pronoun /ke/ 'that' in one set of constructions, and with prepositions in another set. The introduction of the ezafe into surface structures is accounted for by transformational rules.

ACKNOWLEDGMENTS

I wish to express my gratitude to those persons whose suggestions and encouragement helped me in the writing of this dissertation. I am especially appreciative of the interest and advice given by the Chairman of my Doctoral Committee, Professor Herbert H. Paper. I would also like to thank the other members of my Committee, Professors Kenneth A. Luther, Ernest N. McCarus, and David L. Wolfe for reading and criticizing this work.

I am grateful to the Persian speakers with whom I consulted during the preparation of this dissertation. They are Ehsan Kermani, Iraj Mahdavi, Nushin Kafai Razavi, Hassan Sharifi, and Behjat Wolfe. Laura and Andrew Strowe provided extensive editorial and proof reading assistance during the later stages of the study. I am also indebted to Joan McClain for typing the dissertation and drawing all of the tree diagrams.

Finally, I would like to thank Professor Gernot Windfuhr for his extensive advice and criticism during the earlier stages of this study.

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INTRODUCTION

The purpose of this study is to define the syntactic relationships between the constituents of the "ezafe" construction in Modern Standard Persian (MSP). The dialect under consideration is that spoken by inhabitants of Tehran, Iran, and used as the standard written language of Iran. The "ezafe" is indicated in the Persian writing system by a letter affixed to the end of the head-word except when that word ends in a consonant, where it is not indicated. The "ezafe" is realized phonemically as /ye/ following vowels and as /e/ elsewhere. The postconsonantal variety is very much the more frequent. In this study, "E" will be used to indicate the "ezafe" morpheme.

The theory of syntax known as case grammar and expounded by Charles Fillmore[1] will be used as the theoretical framework for this analysis. In this study I will endeavor to account formally for syntactic relations in MSP which, to my knowledge, have not yet been analyzed formally. I will also suggest modifications or additions to Fillmore's theoretical framework which will permit the formal analysis of construction types, such as (3-9) below, to which case grammar has not yet been applied. The following is a list of the types of E-constructions which I will analyze in this study. The Persian examples are cited in transcription.

(1) Adjectival E-constructions: ketab-E-geran 'expensive book'

(2) Extended adjectival E-constructions: ketab-E-sefid E geran 'expensive white book'

(3) Reduced relative clause with deleted verb /dašt-/: madær-E-bæcce dær bægæl 'mother with child in arms'

(4) Reduced relative clause with deleted verb /bud-/: daneš̆juyan-E-æz orupa bærgæšté 'students returned from Europe'

(5) Infinitival E-constructions with active or passive infinitives:

a. koštæn-E-šir 'killing the tiger'

b. košte-šodæn-E-šir 'the tiger's being killed'

(6) Infinitival E-constructions with /budæn/: xub budæn-E-mašin/ 'the car's being good'

(7) Infinitival E-constructions with preposed object: pul daštæn-E-šæxs 'a person's having money'

(8) Infinitival E-constructions followed by a prepositional phrase: koštæn-E-dær jæng 'killing in war'

(9) E-constructions with fronted preverb: negah-E-tun nemud 'He looked at you.'

(10) True possession: ketab-E-hæsæn 'Hassan's book'

(11) Possession of inalienably possessed objects: dæst-E-hæsæn 'Hassan's hand'

(12) Combinations of adjectival and possessive E-constructions:

a. ketab-E-geran-E-hæsæn 'Hassan's expensive book'

b. dæst-E-kæsif-E-hæsæn 'Hassan's dirty hand'

Since this analysis is directed toward a formal statement of the relationship between E-constructions and other grammatical constructions, it must treat these other constructions as well. An example will illustrate this.

E-construction (13) is related to constructions (14-17) in the sense that they all convey the information that the object denoted by /ketab/ 'book' is attributed to the individual denoted by /hæsæn/ 'Hassan' in a relationship which we can call "possession."

(13) ketab-E-hæsæn 'Hassan's book'

(14) hæsæn ketab daræd 'Hassan has a book.'

(15) in ketab mal-E-hæsæn æst 'This book belongs to Hassan.'

(16) ketab-i ke hæsæn daræd 'the book that Hassan has'

(17) ketab-i ke mal-E-hæsæn æst 'the book that belongs to Hassan'

In case grammar, the fact that the constructions above are related is expressed formally by postulating similar underlying abstract structures from which grammatically related structures are derived by the application of explicit rules. Thus a formal syntactic account of the relatedness of (13-17) postulates that all can be derived from similar underlying representations, called deep structures, in which the constant relationship is explicated by the presence of certain common symbols in the deep structures. The fact that there are surface differences in (13-17) is accounted for, in part, by the different rules which can be applied to the underlying deep structures.

To adequately account for the relationship between the E-construction (13) and the other related constructions, it will be necessary to demonstrate how the deep structures are obtained and how

each of the constructions which occur, that is, surface structures, are derived from the deep structures.

In addition to accounting for syntactic relationships between E-constructions and other related grammatical constructions, I will use case theory to account for the non-grammaticality of certain constructions. In other words, I will use the theory and a set of rules to characterize the notion "possible construction" in MSP. These will be used to account for the fact that while (18) and (19) are superficially sequences of noun + infinitive, (20) is a paraphrase of (18) but (21) is not a paraphrase of (19).

(18) abjo xordæn 'beer drinking'

(19) zæmin xordæn 'to fall down'

(20) xordæn-E-abjo 'drinking beer'

(21) xordæn-E-zæmin 'eating ground'

Example (19) also illustrates another problem. /zæmin xordæn/ is ambiguous. If it is interpreted as an intransitive verb composed of two words, it means 'to fall down'. The same sequence /zæmin xordæn/ can also be interpreted as a noun + transitive verb infinitive in which the noun functions as the object of the verb. If this meaning is intended, then (21) would be a paraphrase of (19). A "part of speech" analysis of (19) which specifies that /zæmin/ is a noun and /xordæn/ is an infinitive will not explain why (19) has two different interpretations.

Another goal of this study is to investigate the use of grammatical case in a formal account of a portion of Persian syntax. Specifically, the question under consideration is this: Is the use of case necessary to account for the restrictions on possible constructions

in Persian? If it can be shown that the use of grammatical case permits us to formally account for certain information about Persian grammar which could not be accounted for without its use, then this will have demonstrated the value of grammatical case in a theory of syntax.

In examining the formulation of specific rules for the generation of Persian grammatical constructions, I will be testing the adequacy of the conventions proposed in "The Case for Case"[2] for stating grammatical rules. Where these conventions appear to be unnecessarily restrictive, or where necessary conventions have not been formulated, appropriate revisions will be suggested.

In stating that this study deals with the syntax of E-constructions and related constructions, I do not wish to imply that this will constitute an exhaustive treatment of all E-constructions. I will have to avoid the analysis of idioms or metaphors in which the ezafe is used. This restriction is necessary if the study is not to become a treatise on semantics, analogy, or the origin of metaphor. By defining the limit of this analysis as the point at which it no longer becomes possible to demonstrate convincingly that an E-construction can be systematically restated or paraphrased, I am avoiding an area of linguistic analysis which I believe more properly belongs in lexicology than in syntax.

Finally, there are certain other E-constructions for which I can offer no analysis. This is partly because the theoretical model being followed has not been developed in these particular areas. Two such areas are illustrated in the following examples.

(22) Apposition: hæsæn-E-bæradær-æm 'Hassan, my brother'

(23) Translated E-constructions: rah-E-ahæn 'rail road'

The two literary sources for the examples in this study are a text in Rosen (1898) consisting of extracts from Nāsir ed-Dīn Shāh's diary, and contemporary reading selections in Farzan, Jazayery, and Paper (1962). Initially, I separated the E-constructions found in this material into what were felt intuitively to be different construction types. This classification turned out to be similar to those found in previous studies such as Lazard (1957) and Jazayery and Paper (1961). The E-constructions in the corpus were then reexamined in terms of the ways that they could be paraphrased. In this and subsequent work, several native speakers of Persian were consulted.

I attempted to account for E-constructions and their paraphrases by formulating rules within the theoretical framework of case grammar. Testing several versions of the rules led to additional consultation with informants, during the course of which new examples were often elicited. The examples that finally appear in Chapters Two to Six of this study are primarily obtained from these discussions. Some of the examples are suggested by Fillmore's work in English.

Often there was disagreement among the different informants over the grammaticality of certain examples. I have tried to note this when the example came from another person's data, as in Phillott (1919). Elsewhere, I have weighted the inclusion of an example in favor of acceptability. In other words, when one of the informants unhesitatingly said that an example was acceptable, the example was included in the corpus.

FOOTNOTES

INTRODUCTION

[1]Fillmore 1968.

[2]*Ibid*.

CHAPTER ONE

RELEVANT SCHOLARSHIP

1.1 Introduction. Many grammarians have written extensively on Persian grammar.[1] Their observations and comments on the ezafe are a logical starting point in a modern study. I will approach their works from two points of view. The first is an examination of their statements as collections of different types of E-constructions. The second is a study of their comments and classifications from the point of view of their linguistic significance.

Because of the rather large number of works which offer some comment on the E-construction, a survey would be impractical. It would require, in addition to a study of Persian grammars, that one also comment on the numerous textbooks in which short grammatical statements are incorporated. Therefore, I would like to approach the discussion of existing grammatical treatments by examining two major works, one an early work by Phillott,[2] and the other a recent grammar by Lazard.[3] It is hoped that by the conclusion of this discussion the range of E-constructions will have become apparent.

1.2 Phillott's Analysis. Phillott approached his study of Persian syntax in the traditional way, by describing Persian grammar with the same model used for describing Latin, Sanskrit, and Arabic. He assumed that there were grammatical cases in Persian that were similar to those in Latin, Sanskrit, and Arabic, and he then looked for the ways that

Persian was used to express those grammatical relationships. He also attempted to equate Persian grammatical constructions with English constructions by translation. Although Phillott's linguistic model is out of date, his work nevertheless offers a wealth of examples and comments which have served as the basis for many, if not most subsequent grammars.

Phillott's discussion of the ezafe occurs in several places in his grammar. His first discussion of the syntax of the E-construction comes under the heading "Declension." Here he discusses the nominative, accusative, genitive, instrumental, ablative, locative, and vocative cases. I will follow his terminology and attempt to summarize his comments within his own grammatical framework, limiting the discussion to those two cases which involve the ezafe in some way. The examples below are, unless noted, taken from Phillott. Where an example is not accepted by speakers of MSP, it is preceded by a question mark.

1.2.1 The Dative. Phillott initially suggests that the dative case is marked by either of two morphemes: the preposition /be/ 'to' or the direct object suffix /-ra/.[4]

(24) be mærd 'to the man'

(25) mærd-ra 'the man'

The first use of the dative (24) corresponds to the grammatical relationship "indirect object" in English. This use of the dative with /be/ 'to' is illustrated in (26). The use of the dative case in which the indirect object is marked with /-ra/ is shown in (27).

(26) ketab-ra be mæn dad 'He gave the book to me.'

(27) ? pedær-E-u-ra dadæm 'I gave it to his father.'

The first method of expressing the relationship "indirect object" is the much more common one.

The second use of the dative case corresponds to the grammatical relationship "possession." Phillott notes that the dative suffix /-ra/ is sometimes considered the equivalent of the ezafe, as the following examples illustrate.

(28) yek-i-ra xær-i 'a person's donkey'

(29) xær-E-yek-i 'a person's donkey'

Phillott cites another example of the /-ra/ dative (30) which can be paraphrased with an ezafe construction as illustrated in (31).

(30) padešah-ra golami bud 'The king had a slave.'

(31) golam-E-padešah 'the slave of the king'

1.2.2 The Genitive. Phillott maintains that there is no proper genitive in Persian, but then he says that this case in its possessive sense is expressed by joining two nouns together with the ezafe.[5] He gives two examples of the possessive use of the genitive.

(32) pesær-E-mælek 'son of the king'

(33) ketab-E-pesær-E-mælek 'book of the son of the king'

Phillott also notes that in Persian the "absolute genitive" is expressed by prefixing the word /mal/ 'property' to the possessor as is illustrated in the following examples:

(34) mal-E-mæn 'mine'

(35) in ciz mal-E-dærya æst 'This comes from the sea.'

Summarizing briefly, Phillott suggests that two cases can be marked by the ezafe, but he is unclear about whether or not the genitive is a true case. The notion of case is not clearly defined in Phillott's analysis. He appears to use the term "case" to identify grammatical relationships in Persian which are marked by case terminations in other languages.

In Phillott's analysis "form" and "use" are confused. For example, after identifying /-ra/ as an affix marking the dative case,[6] he later remarks that another particular use of /-ra/ is to express the idea of "possession." He then links the term "possession" with the genitive.[7] This seems to suggest that one use of the dative (the possessive use) is equivalent to the possessive use of the genitive. This leads one to question Phillott's distinction between the terms "dative" and "genitive."

1.2.3 The Persian Grammarians' Analysis of the Ezafe. Following Phillott's discussion of the ezafe with respect to the Persian cases, he turns to a discussion of the Persian grammarians' traditional classes of E-constructions. These classes are distinguished in two ways. The first is a distinction between E-constructions in which the second member is simple versus those in which the second member is complex. Such a distinction is present in (36) and (37). The two constituents /mærd/ 'man' and /xub/ 'good' in (36) are grammatically simple, while the second constituent in (37) /sæng-del/ 'stone-hearted' is grammatically complex.

(36) mærd-E-xub 'the good man'

(37) mærd-E-sæng-del 'the stone-hearted man'

The second type of distinction noted by the Persian grammarians involves the way in which the two members of an E-construction are related to each other. Since the later chapters of this thesis are concerned with the search for a formal explanation of these relationships, the following examples will help to define the scope of the problem, or more precisely, the scope of the data.

1.2.3.1 The Qualifying Ezafe. This category is divided into several subcategories. Its basic feature is that the second member of of the E-construction is an adjective which modifies the first member. Phillott repeats (36) and (37) as examples of the qualifying ezafe and offers the following additional example.

(38) deræxt-E-bi-bæerg 'the tree without leaves'

In the examples of the qualifying ezafe, it is possible to paraphrase the E-constructions with sentences using a form of the copula /bud-/. The following examples are paraphrases of (36-38).[8]

(39) mærd xub æst 'The man is good.'

(40) mærd sæng-del æst 'The man is stone-hearted.'

(41) deræxt bi-bærg æst 'The tree is without leaves.'

Examples (36-38) can also be paraphrased with relative clause constructions as the following examples illustrate:

(42) mærd-i ke xub æst 'the man who is good'

(43) mærd-i ke sæng-del æst 'the man who is stone-hearted'

(44) deræxt-i ke bi-bærg æst 'the tree that is without leaves'

1.2.3.2 The Adverbial Ezafe. Phillott does not discuss the relationship between the members of E-constructions in this class. He does give several examples.

(45) šiše-E-golab 'bottle of rose water'

(46) ab-E-šiše 'bottled water'

I would question including (45) and (46) in a single construction class. In (45) the modifier /golab/ constitutes the contents of the bottle /šiše/. In (46) the modifier /šiše/ specifies a particular property of the water, that it is bottled.

1.2.3.3 The Agential Ezafe. In this type of E-construction the first member expresses the idea "performer of an action," and the second member specifies the object of the action.

(47) forušande-E-ketab 'seller of books'

The underlying grammatical relationship between the members of this construction is suggested by its paraphrase.

(48) kesi ketab miforušad 'someone sells books'

1.2.3.4 The "Passive" Ezafe. The example given by Phillott for this type of E-construction is the following:

(49) ? suxte-E-aftab 'burned by the sun'

This construction differs from those previously noted in that it is not a noun phrase. It is a modified passive participle and is probably related to the following sentence.

(50) kesi æz aftab suxte-šod 'Someone was burned by the sun.'

I believe that (49) as it stands is incomplete. The complete noun phrase which contains it and which could stand independently as the subject of a sentence would be the following:

(51) ? suxte-E-aftab šodæn 'being burned by the sun'

1.2.3.5 The Possessive or Property Ezafe.

(52) gænj-E-hækim 'the sage's treasure'

(53) šah-E-iran 'the Shah of Iran'

Example (52) has two sentential paraphrases, each showing possession.

(54) hækim gænj daræd 'The sage has a treasure.'

(55) gænj mal-E-hækim æst 'The treasure belongs to the sage.'

The relative clauses below are also paraphrases of (52).

(56) gænj-i ke hækim daræd 'the treasure which the sage has'

(57) gænj-i ke mal-E-hækim æst 'the treasure which belongs to the sage'

Example (53) has at least one related possessive construction.

(58) iran šah daræd 'Iran has a Shah.'

However, the following paraphrase is not entirely acceptable to native speakers.

(59) ? šah mal-E-iran æst

If they do accept it, it is not in the possessive sense, but in the same way that /pesær mal-E iran æst/ means "the boy is from Iran."

The lack of complete parallelism between (52) and (53) as shown above could be due to the fact that /hækim/ 'sage' denotes an animate being capable of having or possessing property. It may be that inanimate objects or places do not possess things or own property in the same sense that animates do.

1.2.3.6 The Particularizing or Specifying Ezafe.

(60) dokan-E-qæssab 'the butcher's shop'

Example (60) has the following paraphrase.

(61) dokan mal-E-qæssab æst 'The shop belongs to the butcher.'

The meaning of (61) is parallel to the meaning of (60). In both, /qæssab/ 'butcher' does not specify a particular kind of shop, but specifies the owner of the shop. The shop might not even be a "butcher shop."

If Phillott had cited (62) as an example of the particularizing ezafe, then it would not be paraphrasable as (61).

(62) dokan-E-qæssabí 'butcher shop'

Therefore, I take (62) to be the intended example, since (60) is more properly an example of the possessive ezafe.

A noun which has been "particularized" can also be possessed, as the following example illustrates:

(63) dokan-E-qæssabí-E-hæsæn 'Hassan's butcher shop'

An object cannot, however, be possessed twice in a single E-construction. This I take to be an instance of a general principle that two nominal modifiers in a multiple member E-construction cannot have the same grammatical relationship to the head-noun. By this principle, the following would be incorrect if we intended by it to say that the shop belongs to both Hassan and Mahmud.

(64) dokan-E-hæsæn-E-mæhmud

The only interpretations of (64) are that Hassan and Mahmud are the two names of a single person, or that Hassan is the son of Mahmud.

1.2.3.7 The Descriptive Ezafe.

(65) sa'æet-E-tæla 'gold watch'

(66) ketab-E-ma 'our book'

Phillott remarks that (66) might be included under the possessive ezafe (see 1.2.3.5 above). This seems much more reasonable since it has all of the same paraphrases as (52). On the other hand, (65) has no obvious paraphrase unless it is the following:

(67) sa'æt-i ke æz tæla saxte-šod 'the watch which was made from gold'

1.2.3.8 The Ezafe of Manifestation.

(68) ketab-E-golestan 'the book "Golestan"'

(69) ruz-E-šæmbe 'the day Saturday'

These examples have the following paraphrases:

(70) esm-E-ketab golestan æst 'The name of the book is Golestan.'

(71) esm-E-ruz šæmbe æst 'The name of the day is Saturday.'

1.2.3.9 The Cognate Ezafe. The example cited by Phillott for this type of E-construction is the following:

(72) bad-E-sæbah 'morning breeze'

It is not clear in what way the cognate ezafe differs from the specifying ezafe (see 1.2.3.6).

1.2.3.10 The Ezafe of Filiation. For this class of E-construction Phillott gives the following example:

(73) æbbas-E-æli 'Abbas, son of Ali'

Another interpretation of this construction would have /æbbas/ indicating a first name and /æli/ indicating a family name. The relationship of the first to the second member of (73) is statable in the following paraphrases:

(74) pesær-E-æbbas æli æst 'The son of Abbas is Ali.'

(75) æbbas pesær-i daræd væ esm-eš æli æst 'Abbas has a son, and his name is Ali.'

1.2.3.11 The Ezafe of Simile. For this type of E-construction Phillott cites the following example:

(76) ? nærges-E-cešm 'the narcissus of one's eye'

Persian speakers do not accept (76), but they suggest the following as being equivalent.

(77) nur-E-cešm 'the apple of one's eye'

1.2.3.12 The Ezafe of Metaphor.

(78) dæst-E-æql 'the hand of wisdom'

1.2.4 Additional Types of E-constructions Noted in Phillott.

Throughout Phillott's grammar one can find various comments on the E-construction. Those previously cited came from two sources, Phillott's analysis of case in Persian, and his summary of the traditional grammarians' classification of E-constructions. The following examples were not presented in as systematic a manner, but nevertheless they further enlarge the range of grammatical relationships which can be characterized by E-constructions.

1.2.4.1 The Quantifying Ezafe. This type of E-construction has a quantity word in the first position followed by a noun in the second.

(79) jæmi'-E-mærdom 'all of the men'

(80) tæmam-E-ab 'all of the water'

1.2.4.2 The Ezafe with the Superlative. The superlative form of the adjective precedes the noun which it modifies. They are joined with an ezafe.

(81) behtærin-E-mærdha 'the best of men'

1.2.4.3 The Ezafe Alternating with a Preposition.

(82) mohtaj-E-pul nistæm 'I don't need money.'

(83) mohtaj be pul nistæm 'I don't need money.'

I suggest the following additional paraphrase:

(84) mæn be pul mohtaj nistæm 'I don't need money.'

In examples (82-84) /mohtaj/ is used with a specific conjugated verb, or "main verb." The two words together constitute a complex verb phrase. I will call the general class of "incomplete verbs" such as /mohtaj/ "fore-verbs" meaning that they occur before the main, or conjugated verb. Jazayery and Paper[9] further subclassify some fore-verbs as pre-verbs, noting that pre-verbs in particular cannot take the direct object suffix /-ra/. The following are some examples of pre-verbs and the main verbs with which they are used.

(85) vared + šod- 'to arrive'

(86) nešun + dad- 'to show'

(87) færamuš + kærd- 'to forget'

(88) sævar + bud- 'to be mounted upon'

The construction: fore-verb + E + noun is often not a complete noun phrase and cannot function independently as the subject of a sentence.

(89) *færamuš-E-tun asan nist 'Forgetting you isn't easy.'

However, when the fore-verb with its main verb are both constituents of an E-construction, then that E-construction is a noun phrase and it can be used independently as the subject of a sentence.

(90) nešan dadæn-E-jævab mæmnu' æst 'Showing the answer is forbidden.'

1.2.4.4 The Prepositional Ezafe. Some prepositions such as /dær/ 'in' are followed by a noun: /dær ab/ 'in the water'. Others can be followed by the ezafe, and then by a noun. Some of these, taken from Phillott's list of prepositions and prepositionals, are the following:

(91) a. bæra-E- 'for'
b. tu-E- 'in'
c. miyan-E- 'between'
d. sævar-E- 'on'
e. daxel-E- 'inside'
f. ændærun-E- 'inside'
g. dombal-E- 'for'
h. næzdik-E- 'near'
i. zir-E- 'under'
j. birun-E- 'outside'
k. xarej-E- 'outside'
l. piš-E- 'before'
m. ru-E- 'on'
n. ru-be-ru-E- 'opposite'
o. be-ja-E- 'instead'

1.2.4.5 The Obligatory Ezafe. According to Phillott, there are a number of constructions which require the ezafe. These appear, in some cases, to overlap with uses mentioned in the traditional grammarians' analysis.

1.2.4.5.1 Proper Name + E + Profession.

(92) mohæmmæd-xan-E-tajer 'Mohammad, the merchant'

This E-construction has the following paraphrase:

(93) mohæmmæd-xan tajer æst 'Mohammad is a merchant.'

1.2.4.5.2 Proper Name + E + Territory or Tribe or Descriptive Epithet.

(94) hatem-E-ta'i 'Hatem of the tribe "Tay"' or 'Hatem the generous'

(95) haji-aqa-E-širaz 'Haji Agha of Shiraz'

(96) musa-E-peyqæmbær 'Moses the prophet'

1.2.4.5.3 The Words "Country," "City," "River," etc. + E + Name.

(97) šæhr-E-kerman 'the city Kerman'

(98) rud-E-nil 'the river Nile'

Note the similarity between these constructions and those in 1.2.3.8 above.

1.2.4.5.4 "Book" + Title.

(99) ketab-E-golestan 'the book Golestan'

This construction is identical to an example in 1.2.3.8 also.

1.2.4.5.5 The Ezafe with Fractions.

(100) nesf-E-nan-i 'half a loaf'

(101) sols-E-ketab 'a third of a book'

1.2.4.5.6 Noun or Infinitive + E + Qualifying Phrase.

(102) ruz-E-bæd æz zæd-o-xord 'the day after the skirmish'

1.2.4.5.7 Obligatory Ezafe Following Particular Words.

1.2.4.5.7.1 Honorific Word + E + Occupation.

(103) jænab-E-hækim-baši 'His Honor the chief physician'

1.2.4.5.7.2 /mæblæq/ 'sum' + Number.

(104) mæblæq-E-devist toman 'the sum of 200 tomans'

1.2.4.5.7.3 /æhl/ 'resident' + Place.

(105) æhl-E-kerman 'resident of Kerman'

1.2.4.5.7.4 /ærbab/ 'masters' + E + Substantive.

(106) ærbab-E-xæræd 'masters of wisdom'

1.2.4.5.7.5 /mærhum/ 'deceased' + E + Substantive.

(107) mærhum-E-pedær-æm 'the deceased, my Father'

1.2.4.5.7.6 /æbna/ 'Fellow' + E + Substantive.

(108) æbna-E-vætæn 'Fellow countrymen'

1.2.4.5.7.7 /saheb/ 'owner' + Substantive.

(109) saheb-E-xane 'the owner of the house'

1.2.4.6 Infinitive + E. Phillott cites a use of the ezafe in a construction in which an infinitive governs a preposition for which an ezafe can be substituted. This use of the ezafe does not fall into any of the classes of the traditional grammarians.

(110) dær-amædæn-E-baq 'coming out of the garden'

(111) ? dær-amædæn dær baq 'coming out of the garden'

Phillott also notes that in some cases the ezafe may be used with a preposition as in (112).

(112) ? mærdoman-E-dær kerman 'the people of Kerman'

The grammaticality of examples (111-112) is questionable to speakers of Tehran Persian. They would accept the following two constructions in which either the ezafe or a preposition is used.

(113) mærdoman-E-kerman 'the people of Kerman'

(114) mærdoman dær kerman 'people in Kerman'

Another example of an ezafe alternating with a preposition is the following, but for some speakers of Persian, (116) is not acceptable.

(115) bæ'd æz sævar-šodæn dær kæšti 'after getting into the boat'

(116) ? bæd æz sævar-šodæn-E-kæšti 'after getting into the boat'

If we accept Phillott's evidence that the ezafe can be substituted for prepositions, and if we also accept Phillott's assertion that the ablative, locative, and instrumental cases are formed by prepositions,[10] then the ezafe and prepositions are allomorphs.

1.3.1 Gilbert Lazard's Grammaire du Persan Contemporain is one of several modern works in which the E-construction is treated.[11] Lazard classifies E-constructions into five major types. Several of

these main construction classes are subdivided into minor classes. The following is a discussion of Lazard's classification.

1.3.2 Qualification by an Adjective, Participle, or Substantive.

(117) ab-E-gærm 'warm water'

(118) æyyam-E-gozæšté 'past days'

(119) yusef-E-peyqæmbær 'Joseph, the prophet

(120) sæ'di-E-širazí 'Sa'di of Shiraz'

The examples above can all be paraphrased as sentences employing the copula /bud-/.

(121) ab gærm æst 'The water is warm.'

(122) æyyam gozæšté st 'The days are past.'

(123) yusef peyqæmbær bud 'Joseph was a prophet.'

(124) sæ'di širazí bud 'Sa'di was from Shiraz.'

1.3.3 Situation. The modifying constituent in this class has the form of a "circumstantial complement."[12] From Lazard's examples I interpret this as meaning that the modifier states the location, in time or in space, of the head noun.

(125) jævanha-E-emruz 'today's youth'

(126) sal-E-qæbl 'last year'

(127) qali-ha-E-tu-E-sænduq 'the carpets in the trunk'

(128) ruz-E-bæ'd æz ettefaq 'the day after the event'

Examples (126-128) can be paraphrased with sentences employing the copula, but example (125) cannot.

(129) *jævan-ha emruz-ænd

(130) sal-i qæbl æst 'The year is past.'

(131) qali-ha tu-E-sænduq hæstænd 'The carpets are in the trunk.'

(132) ruz bæ'd æz ettefaq bud 'The day was after the accident.'

1.3.4 Qualification by a Substantive. In this construction class the qualifying noun indicates a characteristic or a property of the head noun. This relationship evidently contrasts with that of class 1.3.2, although the same term "qualification" is used to describe both classes. Lazard cites three non-metaphorical examples of qualification by a substantive.

(133) ab-E-ceŝmé 'spring water'

(134) taj-E-zær 'crown of gold'

(135) ketab-E-ædæbiat 'book of literature'

There are syntactic grounds for distinguishing 1.3.2 and 1.3.4, since none of the examples in 1.3.4 can be paraphrased in sentences such as were used to paraphrase the examples in 1.3.2.

1.3.5 Appurtenance. This class contains three sub-classes.

1.3.5.1 Possession.

(136) xane-E-hæsæn 'Hassan's house'

(137) pedær-E-doxtær 'the Father of the girl'

Lazard notes that possession can also be expressed with the word /mal/ 'property'. The constructions of 1.3.5.1 can be paraphrased in sentences containing either /daŝ-/ 'have' or /mal/.

(138) hæsæn xane daræd 'Hassan has a house.'

(139) xane mal-E-hæsæn æst 'The house belongs to Hassan.'

1.3.5.2 Relationships in Which the Modifier Makes the Modified Noun Definite. It is not completely clear how this type of E-construction contrasts with 1.3.4. Lazard cites the following examples.

(140) pul-E-nahar 'lunch money'

(141) ævvæl-E-xiaban 'the beginning of the street'

(142) moqe-E-ræftæn 'the moment of departure'

In (140), "money" is not necessarily made more definite by characterizing its use. One might think of lunch money either indefinitely as a kind of money, or definitely as the money used to buy a particular lunch. Therefore, Lazard's characterization of this type of modification as making the modified noun definite appears to be incorrect. A different characterization might be a negative one: modification by a substantive which does not specify an inherent property of the head noun. In examples (140-142) /nahar/ 'lunch' is not an inherent property of /pul/ 'money', and /xiaban/ 'street' is not an inherent property of /ævvæl/ 'beginning'.

Lazard cites additional examples in which the head noun denotes an action and the modifier denotes the subject or object of the action. In these examples the modifier does not appear to specify an inherent property of the head noun.

(143) mærg-E-pedær-æm 'the death of my Father'

(144) qætl-E-dæqiqi 'the murder of Daqiqi'

The distinction between "inherent" and "non-inherent" properties is clearest when one contrasts nouns denoting body parts with other nouns.

(145) ceš̆m-E-nahid 'Nahid's eyes'

(146) ketab-E-bæhram 'Bahram's book'

Body parts are normally considered inherently possessed or attached to living beings. Thus /nahid/ only specifies the particular individual who "possesses" the eyes. In (146) the word /bæhram/ reveals two facts: 1) the book is possessed, and 2) the identity of the possessor. Other distinctions between inherent and non-inherent properties are not as easy to make, and until further studies are made, confusion will persist.

1.3.6 Specification by a Proper Noun or a Name. In Lazard's examples of this type of modification, the modifying noun can be substituted for the entire E-construction.

(147) šæhr-E-tehran "the city 'Tehran'"

(148) ræftæm šæhr-E-tehran "I went to the city 'Tehran'."

(149) ræftæm tehran 'I went to Tehran.'

(150) ruz-E-šæmbe "the day 'Saturday'"

(151) ruz-E-šæmbe miayæm "I will come on the day 'Saturday'."

(152) šæmbe miayæm 'I will come on Saturday.'

FOOTNOTES

CHAPTER ONE

[1]Geiger and Kuhn 1901; Jensen 1931; Seiler 1960; Mo'in 1962; Lazard 1963; Boyle 1966; and others.

[2]Phillott 1919.

[3]Lazard 1957.

[4]Phillott 1919, p. 51.

[5]Ibid., p. 52.

[6]Ibid., p. 51.

[7]Ibid., p. 52.

[8]Paraphrases, unless noted otherwise, are mine (A.S.P.).

[9]Jazayery and Paper 1961, p. 199.

[10]Phillott 1919, p. 52.

[11]Lazard 1957; Hincha 1961; Jazayery and Paper 1961; Shaki 1967.

[12]Lazard 1957, p. 64.

CHAPTER TWO

THEORETICAL ASSUMPTIONS

2.1 Introduction. The theoretical basis for this study is Charles Fillmore's theory of syntactic descriptions.[1] This theory is a set of principles which are basic to the syntactic descriptions of all languages. It provides a formal means of characterizing grammatical relationships, and also specifies principles by which rules are written to account for the ways these grammatical relationships are expressed in a particular language.

2.2 Deep and Surface Grammatical Relationships. There are two basically different sets of grammatical relationships. One set is comprised of relationships which can be expressed in terms of the form and position of words and morphemes as they occur in actual sentences. These relationships are called surface relationships. The second set includes relationships which are independent of the particular surface form of sentences. They characterize relationships which are more abstract or deeper than surface relationships.

Several sentences will illustrate the distinction between deep and surface grammatical relationships.

(153) John killed the tiger with this gun.

(154) This gun killed the tiger.

(155) The tiger was killed by John with this gun.

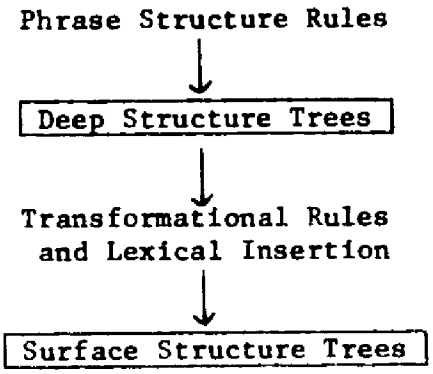
Speakers of English will probably agree that the three sentences above convey the same information, except that the identity of the agent performing the action is omitted from sentence (154). The subject varies, however, in (153-155). In (153) John is the subject. In (154) this gun is the subject. In (155) the tiger is the subject.

Surface grammatical relationships can often be defined by word order or morphological criteria. For example, in the examples above, the subject is the noun phrase which immediately precedes the verb and which concords with it. Deep structure relationships cannot be specified so easily. In the examples, there is no word order or morphological criteria which enable us to reach the conclusion that John has performed the same role (that of agent) in (153) and (155), and that the tiger has undergone the same treatment, and that this gun was used to perform the action specified by the verb kill. It is this commonalty of roles which must be accounted for in analyzing the above sentences. The surface representations of (153) and (155) do not convey enough information to account for the fact that the role of John is the same in these two sentences.

The differences between surface relationships such as "subject" and deep relationships such as "agent" are accounted for in different parts of grammars. Unvarying relationships are accounted for in deep structure, and position/form relationships are accounted for in surface structure.

2.3 The Components of a Syntactic Description. The following diagram is my interpretation of the structure of Fillmore's theory of syntactic descriptions.

(156)



There are certain symbols which are necessary to specify the word classes and construction types which are relevant to a grammatical description. For English, as well as Persian, this inventory might consist in part of the following symbols:

(157)

S: Sentence

P: Proposition

M: Modality

CASE: A cover symbol for all deep structure CASES,[2] which are the following:

- A: Agentive
- O: Objective
- D: Dative
- I: Instrumental
- L: Locative

K: The cover symbol for the morpheme used to mark a particular CASE

VP: Verb Phrase

V: Verb

FV: Fore-Verb

MV: Main Verb

NP: Noun Phrase

N: Noun

ADJ: Adjective

DET: Determiner

Excluded from this list are adverbs, conjunctions, interjections, and other parts of speech necessary to a complete syntactic description. Since the description of this particular subset of a complete syntax does not require rules using these parts of speech, they need not be mentioned any further.

2.3.1 The Deep Structure CASES. The symbols listed under the heading CASE above specify the deep (unchanging) roles of noun phrases in the propositional part of sentences. The proposition contains the verb and those NPs which are so closely associated with the verb as to be subject to the selectional restrictions imposed by the verb. The particular nature of the relationship between a NP in the proposition, and the verb in that proposition, is marked by the CASE label of the NP. Thus the L CASE marks a different CASE relationship than the A CASE. The following is a description of the different CASES to be used in this study.

(158) A: (Agentive) The animate instigator of an action.

D: (Dative) The animate being affected by an action or a state. This includes the possession relationship.

I: (Instrumental) The inanimate object used to accomplish or instigate an action.

O: (Objective) The entity (unspecified as to animate or inanimate) affected by the action or condition denoted by the verb.

L: (Locative) The designation of location or direction required by the verb.

There is a difference between CASE as used in this study and its traditional use. Surface cases have long been used to distinguish between surface uses of noun phrases. The surface use of a noun phrase is often signaled by an affix or the particular word order.

In this study we are concerned with the unchanging role of a noun phrase, regardless of how it may be marked in surface structure. The instrumental noun phrase in example (153) is marked by the preposition with since it is functioning as a complement to the verb, but in example (154), where the instrumental noun phrase is functioning as the subject of the sentence, it is unmarked.

Traditionally, the noun phrase this gun would be considered in the instrumental case in (153) and (155), but not in the nominative case in (154). If we can accept that (153-155) are related sentences and that the roles played by the noun phrase in these sentences are unchanged, then there is no longer any reason to use the term "nominative" to refer to a particular deep structure CASE.

Deep structure CASES provide a means of specifying the kinds of complements required or permitted by the verbs of a language. This specification is called the "CASE frame" of a verb. The following are the CASE frames of two English verbs.

(159) kill [(A)(I) D____]

(160) die [D____]

CASE frames such as those in (159-160) are to be interpreted as follows: The verb kill can be used with a noun phrase in the D CASE and either a noun phrase in the I or A CASES or both. Thus, the verb kill can be used in each of the following environments.

(161) A D

(162) I D

(163) A I D

Sentences illustrating combinations of noun phrases in the CASES specified in (161-163) are the following:

(164) John killed David.

(165) The poison killed David.

(166) John killed David with the poison.

A verb like die can be used only with a NP which specifies the animate being which is affected by the state or condition characterized by the verb. Such NPs are in the D case (see 158 above). This is illustrated in the following sentences.

(167) David died.

(168) *The table died.

2.3.2 Phrase Structure Rules. The remaining component of the deep structure consists of the phrase structure rules (PS-rules) which specify the ordering of the deep structure symbols. These rules are

stated in the form X⟶ Y Z to be interpreted "rewrite the symbol X as the symbols Y and Z in that order." Using some of the deep structure symbols from (157) Fillmore wrote the following set of rules for the deep structure of English.[3]

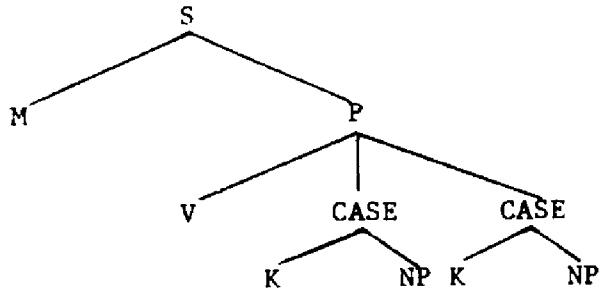
(169) S⟶ M P

(170) P⟶ V CASE...CASE

(171) CASE⟶ K NP

Rule (170) is to be interpreted as generating strings consisting of one verb followed by CASE labels such as those in (158). The three dots indicate that at least one CASE must be generated. The CASE labels, if there are more than one, must all be different. Applying rules (169-171) in the order that they are written yields the following deep structure tree diagram.

(172)

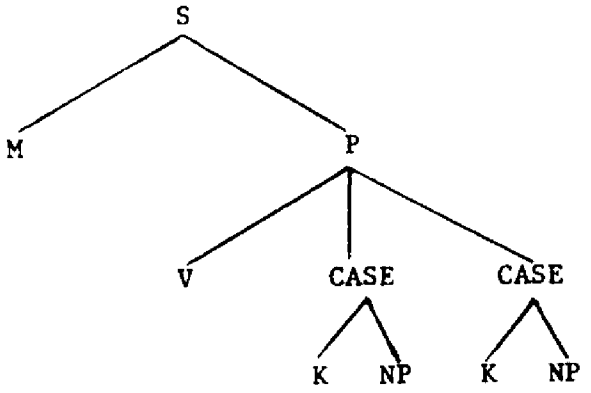


The effect of limiting phrase structure rules to the form X⟶ Y Z is that the deep structure trees obtained will contain symbols in one order only. Thus the phrase structure rules for English specify the order of the constituents in the deep structure of English.

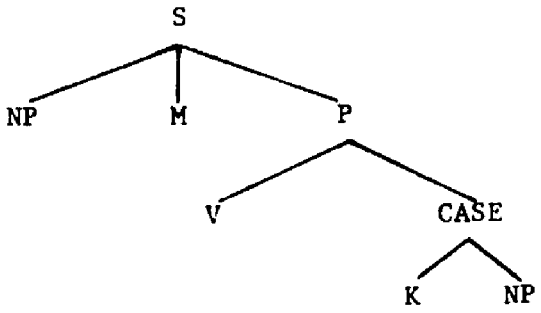
2.3.3 Transformational Rules. The rules which transform deep structure trees into surface structure trees, or which change the form of surface structure trees, are called transformational rules (T-rules). These rules differ from phrase structure rules in the following ways: they may permute the constituents, they may copy the constituents from one part of a tree into another part of the tree, or they may add and delete constituents.

Transformational rules have two components. The first is a description of the structure to be transformed in the form of a labeled tree diagram. The second component defines the operation to be performed on the tree by describing the transformed tree structure. For example, the subject raising rule for English[4] removes a NP from P and attaches it directly to S. The CASE label to which the subject NP is attached is deleted along with the K label. In the following example, (173) is the description of the structure to be transformed, and (174) shows the transformed tree structure.

(173)

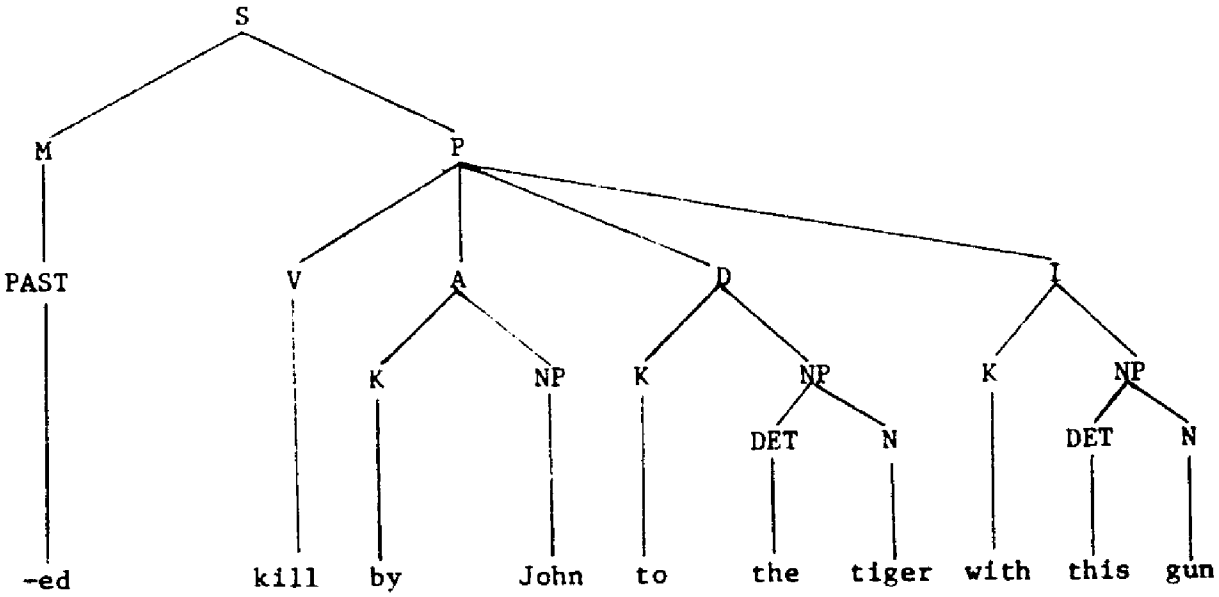


(174)

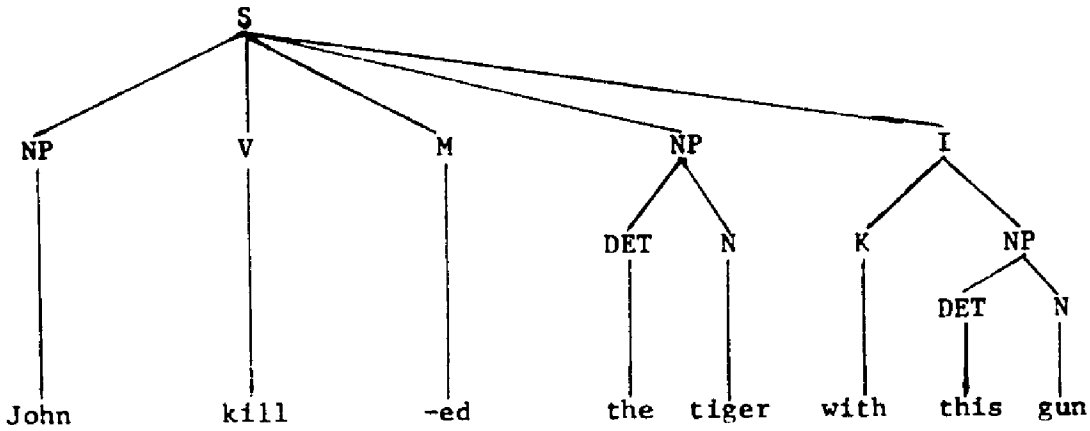


The following examples show the results of applying the subject raising transformation to a single deep structure. Diagram (175) shows the deep structure underlying examples (153-155). The following three diagrams show the transformed tree structures corresponding to examples (153-155) after each of the CASES in (175) has been raised to the subject position.

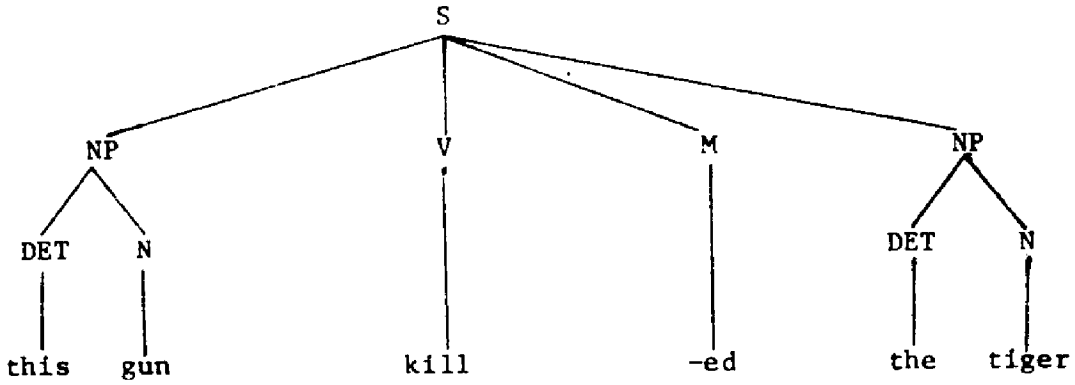
(175)



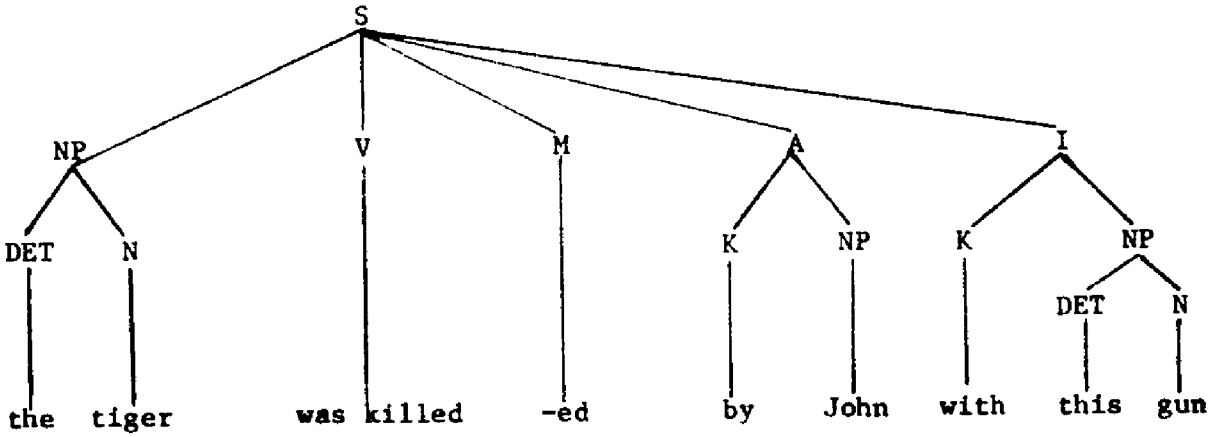
(176)


S
NP
V
M
NP
I
DET
N
K
NP
DET
N
John
kill
-ed
the
tiger
with
this
gun

(177)


S
NP
V
M
NP
DET
N
DET
N
this
gun
kill
-ed
the
tiger

(178)


S
NP
V
M
A
I
DET
N
K
NP
K
NP
DET
N
the
tiger
was killed
-ed
by
John
with
this
gun

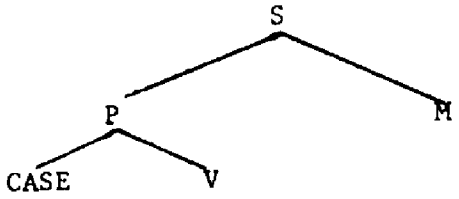
In each of the surface structures (176-178) a different NP has been moved to the front of the sentence, and its CASE label has been deleted. The order of M and V has been switched. The CASE label of the surface direct object has been deleted, and the symbol P has been deleted.

Phrase structure rules, unlike transformational rules, are restricted to the form X⟶ Y Z. They are not permitted to permute or delete constituents. Therefore, given a specific set of phrase structure rules, only a limited set of deep structures can be obtained. This is illustrated in the following four sets of PS-rules and the tree diagrams which they generate.

(179) PS-Rules: S⟶ P M

P⟶ CASE V

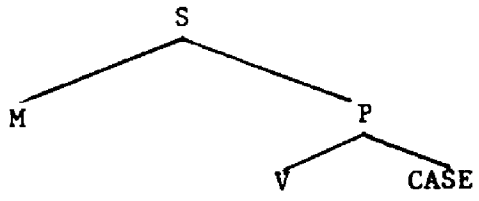
Tree Diagram:



(180) PS-Rules: S⟶ M P

P⟶ V CASE

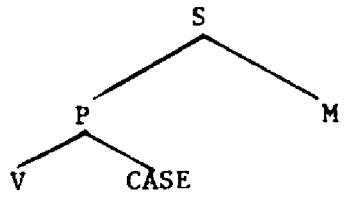
Tree Diagram:



(181) PS-Rules: S⟶ P M

P⟶ V CASE

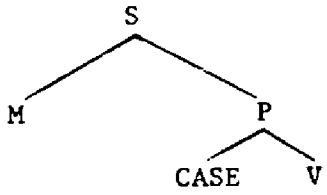
Tree Diagram:



(182) PS-Rules: S⟶ M P

P⟶ CASE V

Tree Diagram:



The linear order of constituents in the tree diagrams of (179-182) is the following:

(183) CASE V M

(184) M V CASE

(185) V CASE M

(186) M CASE V

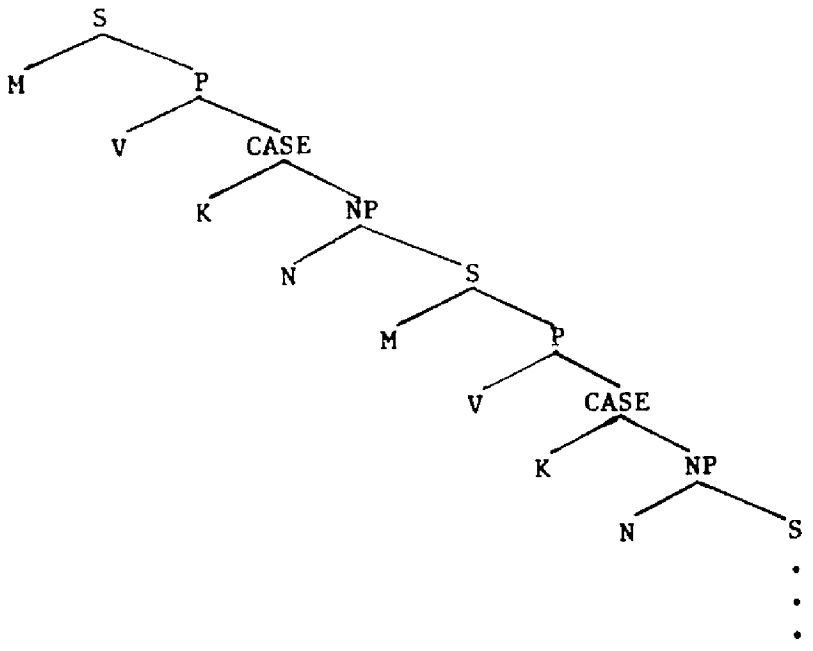
The constituent order V M CASE is unobtainable, because V and CASE are both constituents of P (P⟶ V CASE). Using PS-rules such as those above it is not possible to separate two constituents derived from a single symbol. Stated another way, discontinuous morphemes (or constituents) are not obtainable with context-free phrase structure rules.

It is not obvious why this restriction is desirable. It is possible, for example, that one would want to specify the deep structure order of the constituents of MSP as CASE M V. This cannot be accomplished with phrase structure rules because both CASE and V are constituents of P, and there is no way to introduce M between V and CASE.

2.3.4 Recursive Phrase Structure Rules. Phrase structure rules are divided into two categories, recursive and non-recursive. The non-recursive rules do not provide for the introduction of the symbol S on the right-hand side of a rule. An example of a non-recursive rule is P $\longrightarrow$ V CASE. An example of a recursive rule is NP $\longrightarrow$ N S.

Recursive rules provide for the generation of strings of infinite length since the reintroduction of S allows the phrase structure rules to reapply. There is no theoretical limit to this process as the following example illustrates.

(187)

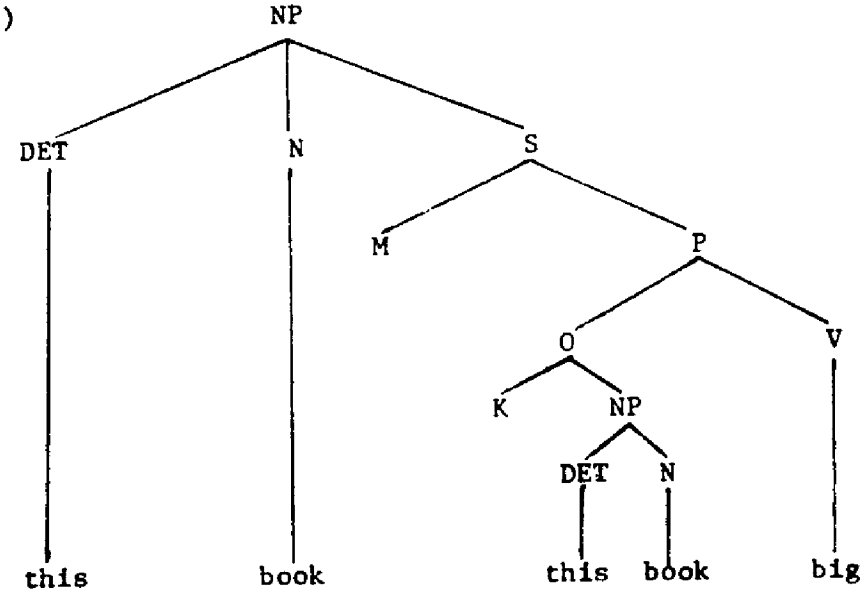


2.4 Nominalizations. In accounting for the syntax of E-constructions, I will show that they can be divided into two main classes, nominalizations and non-nominalizations. The term nominalization has the following definition: a nominalization is a construction resulting from the application of a recursive rule under the symbol NP. The following is an example of such a rule.

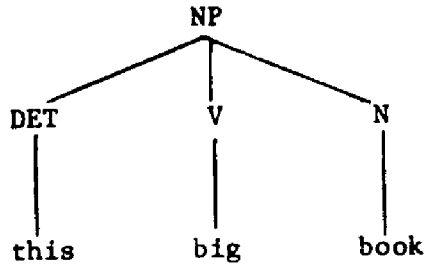
(188) NP ⟶ DET N S

The conversion of a deep structure obtained from (188) into a nominalized surface structure is accomplished by transformational rules which rearrange and delete certain constituents of S. Without specifying the particular rules, the structural conversion can be illustrated by showing the deep structure tree (189) and the surface structure tree (190) which results from the application of the transformational rules.

(189)

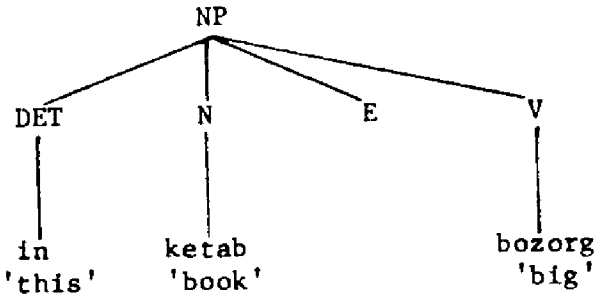


(190)



The MSP equivalent of (190) is /in ketab-E-bozorg/ 'this big book'. Its surface structure is the following:

(191)

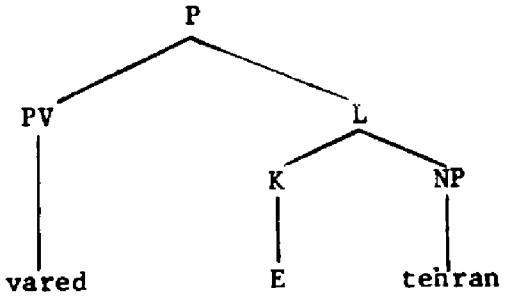


An E-construction which does not result from a nominalization is one which does not begin with the reintroduction of the symbol S on the right-hand side of a rule. Such a construction could be derived by a transformational rule which does not create the ezafe marker directly under a NP constituent. An example of such a construction in MSP is the following:

(192) vared-E-tehran 'arrive in Tehran'

The details of the derivation of (192) will be given later in this study.[5] (193) shows the surface structure of (192) so that it may be compared with a nominalization such as (191).

(193)



A final test of a nominalization is that it can be used independently as the subject of a sentence. In MSP, the nominalization /ketab-E-bozorg/ 'big book' can be used as the subject of a sentence as the following example illustrates.

(194) ketab-E-bozorg geran æst 'The big book is expensive.'

/vared-E-tehran/, which is not a nominalization, cannot be used independently as the subject of a sentence.

FOOTNOTES

CHAPTER TWO

[1]Fillmore 1968. The substance of this chapter is my interpretation of Fillmore's theory.

[2]CASE will be used specificallv to refer to deep structure CASES.

[3]Fillmore 1968, p. 24.

[4]Ibid., pp. 33-34.

[5]Cf. Section 5.2.1.

CHAPTER THREE

DEEP STRUCTURE AND SUBJECT RAISING RULES

3.1 Introduction. The phrase structure rules which specify the deep structures of MSP are divided into two groups, non-recursive and recursive. These rules will be listed and discussed separately. Then the subject raising rules will be presented and illustrated.

3.2 Non-Recursive Phrase Structure Rules. The following are the non-recursive phrase structure rules which are relevant to this study.

(195) PS-1 S⟶ P M

PS-2 P⟶ CASE CASE...VP

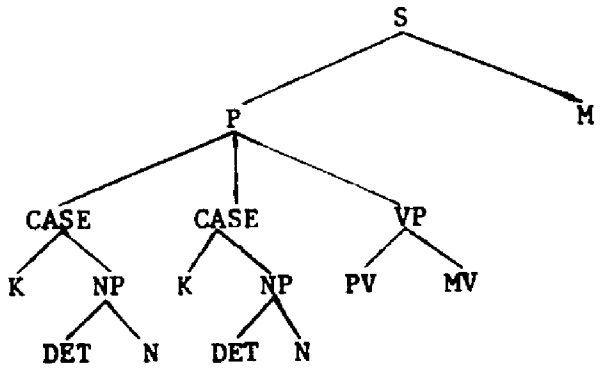
PS-3 CASE⟶ K NP

PS-4 NP⟶ (DET) N (CASE)

PS-5 VP⟶ (PV) MV

If these rules are applied to an initial symbol "S" in the order stated, the following tree is obtained.[1]

(196)



PS-1 specifies the order of the two main constituents of S. The order specified is desirable because the verb in simple sentences usually occurs at the end of the sentence, and at least part of the information contained in the constituent M must be incorporated into the verb. For example, the tense/aspect/negative information in M occurs in surface structures in the form of verb affixes or changes in the verb stem itself.

(197) An pesær næ-ræf-t 'that boy negative-past verb stem-third person singular'

PS-2 specifies the order of the constituents of P. In all MSP sentences the verb can occur at the end of the sentence, and in some sentences it must occur at the end. The following examples illustrate this.

(198) hæsæn bahuš æst 'Hassan is intelligent.'

(199) an pesær šir-ra košt 'That boy killed the lion.'

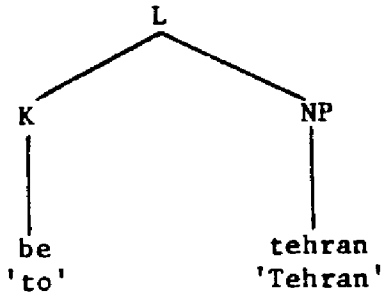
(200) bæradær-E-mæn be tehran ræft 'My brother went to Tehran.'

(201) bæradær-E-mæn ræft tehran 'My brother went to Tehran.'

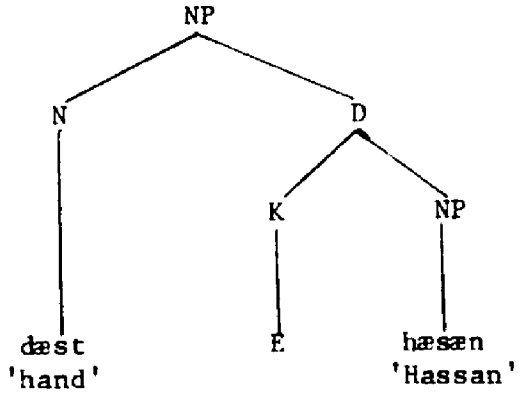
In (198) the order specified, with the verb at the end, is the only one possible. The normal order in (199) is the one illustrated. (201) shows an alternative order for (200), but this alternative is not possible unless the NP at the end of the sentence is in the L CASE. The verb cannot occur at the front of the sentence in any of the above examples. In addition to specifying the most common position for the verb, PS-2 insures that the verb will occur next to the M constituent.

PS-3 specifies the order of K and NP under the CASE label. K will be realized as either a preposition (202) or as the ezafe (203).[2]

(202)



(203)



PS-4 specifies the order of the constituents of the NP. Demonstratives and numbers are associated with the determiner constituent, and they precede the noun in the NP.

(204) do-ta doxtær 'two girls'

(205) an ketab 'that book'

The optional CASE in PS-4 is needed when an object is inalienably possessed.[3] An example illustrating the order of the object and its possessor is (203) above. The reverse order is incorrect.

(206) *hæsæn-E-dæst

PS-5 specifies the order of the constituents of the verb phrase. The specification of an independent syntactic constituent which precedes the verb is needed to account for the structure of verb phrases containing pre-verbs.[4] The syntactic category "fore-verb" is the set of these independent syntactic constituents, which includes adjectives as well as those morphemes classified as pre-verbs.

The fore-verb always precedes the main verb. In fact, this ordering restriction is one test for a fore-verb. Another one is that the fore-verb cannot occur with /-ra/.

(207) *šodæn-E-vared

(208) *vared-ra šod

(209) vared-šodæn 'to arrive'

(210) bær-gæštæn 'to return'

(211) xub-budæn 'to be good'

/vared/, /bær/, and /xub/ are fore-verbs. The decision to call adjectives fore-verbs is based upon the following considerations. First, they cannot occur with /-ra/, which is the case with pre-verbs such as /zæmin/ in /zæmin-xordæn/ 'to fall down'. Second, like sequences of pre-verbs and main verbs (207-209) the order of an adjective such as /xub/ 'good' and the main verb /bud-/ 'be' cannot be reversed: */budæn-E-xub/. Third, considering adjectives to be fore-verbs permits the copula /bud-/ to be characterized as a main verb.

The alternative proposed by Fillmore for English[5] is to consider adjectives as verbs and the copula as derived from M. This implies, however, that there is no relationship between /bud-/ and other verb stems such as /ræft-/ 'go'. But as the examples (212) show, these stems

share several properties: They are inflected for person and number; they are preceded by the negative prefix /næ-/; tense and aspect morphemes are attached to these verbs stems; and finally, /bud-/ has been traditionally considered as a verb.

(212) mi-ræv-æm 'I go' hæst-æm 'I am'
næ-ræft-æm 'I didn't go' næ-bud-æm 'I wasn't'
be-r-æm 'that I go' ba-š-æm 'that I be'

The lexical entry for each verb must be marked to specify what sort of complements may or must accompany it under P. In verb phrases which contain both a fore-verb and a main verb in deep structure, both the fore-verb and the main verb must be so marked.

(213) baz-kærd- [AO(I)____]
'open'

When there is no fore-verb, then the main verb is so marked.

(214) mord- [D____]
'die'

Adjectives need not be entered in the lexicon with the main verb /bud-/ since the use of /bud-/ with adjectives is predictable.[6] When considered by itself, though, the adjective must be marked for the CASE of the NP complement it takes.

(215) geran [O____]
'expensive'

(216) xošhal [D____]
'happy'

3.3 Recursive Phrase Structure Rules. The following are the recursive phrase structure rules which are relevant to this study:

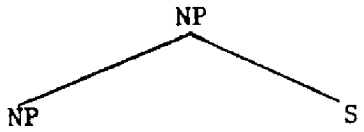
(217) PS-6 NP⟶ NP S

PS-7 O⟶ S

PS-8 S⟶ S conjunction S conjunction S...

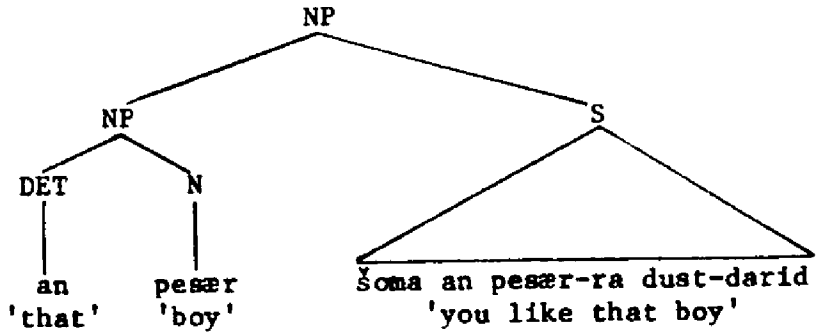
PS-6 specifies the order of the constituents in nominalizations which can be paraphrased as restrictive relative clauses. The rule specifies the following tree.

(218)



The transformational rules which change structures such as (218) into surface structures specify that a noun in the left NP must be identical to a noun in the embedded sentence. At an intermediate stage in the derivation of a restrictive relative clause, the tree diagram will appear as follows. The symbol "△" indicates that the internal structure of whatever "△" dominates is unspecified.

(219)



Transformational rules[7] copy the identical noun /pesær/ at the front of the embedded sentence. Then it is pronominalized to /ke/ 'that'. The relative clause which results from the application of these rules is the following:

(220) an pesær-i-ra ke šoma dust-darid

'the boy that you like'

The order of the constituents specified by PS-6 and illustrated in (220) cannot be changed without producing an ungrammatical construction.

(221) *ke šoma dust-darid an pesær-i-ra

PS-7 specifies that the O CASE symbol may be rewritten as S. This accounts for constructions in which the verb takes a sentence complement such as (222).

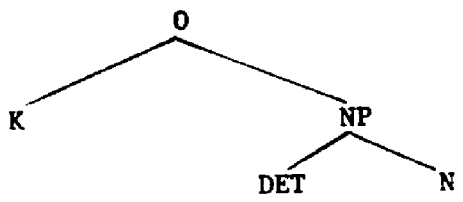
(222) mixaham berævæd 'I want him to go.'

The verb /xast/ 'want' has the following CASE frame:

(223) xast [AO___]

The O CASE symbol from (223) can be rewritten either as a NP by PS-3 (224) or as a S by PS-6 (225).

(224)



(225)

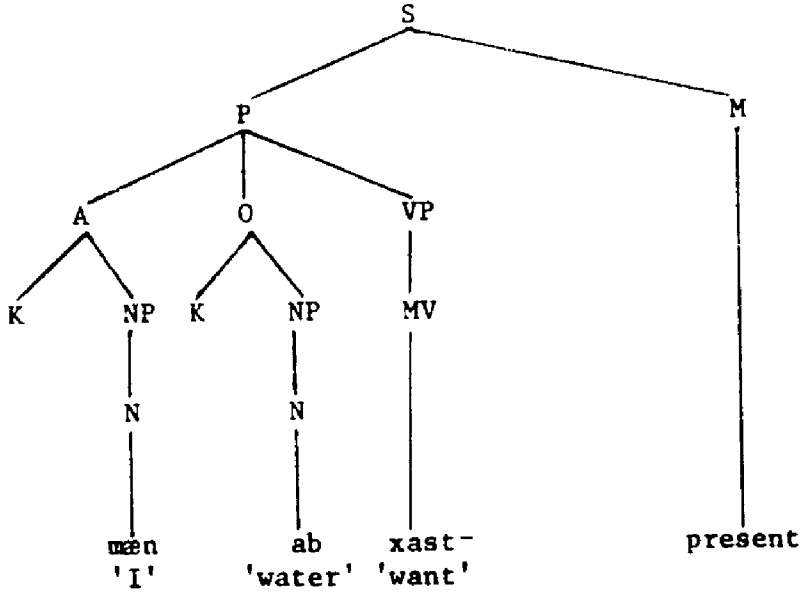
The verb /xast-/ can take two types of complements, a NP complement by PS-3, or a S complement by PS-7.

(226) ab mixahæm 'I want water.'

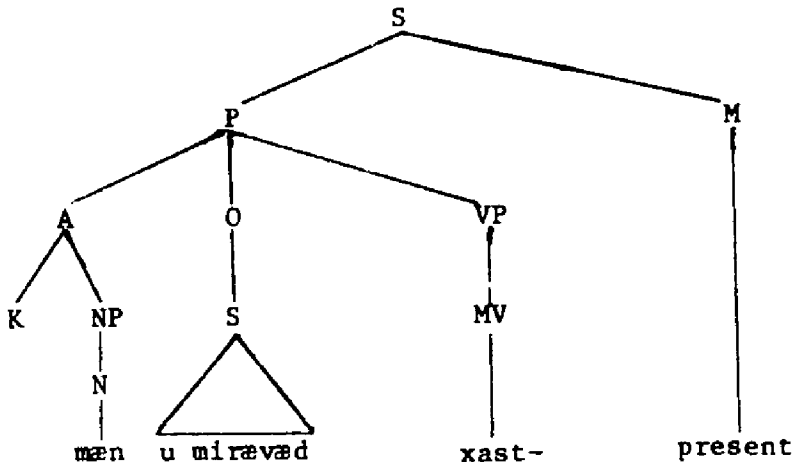
(227) mixahæm berævæd 'I want him to go.'

The deep structure underlying (226) is shown in (228). The deep structure underlying (227) is shown in (229).

(228)

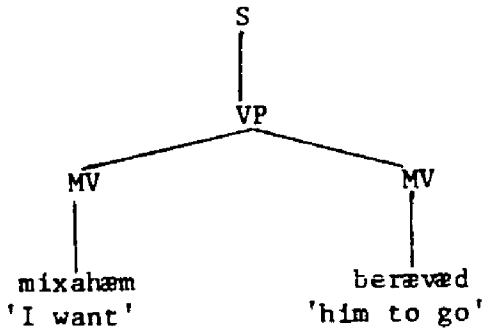


(229)



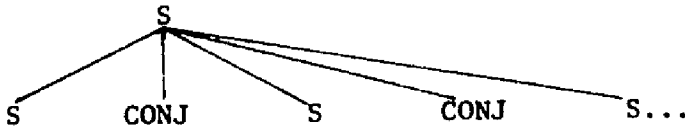
Subsequent transformational rules convert (229) into the following surface structure.

(230)



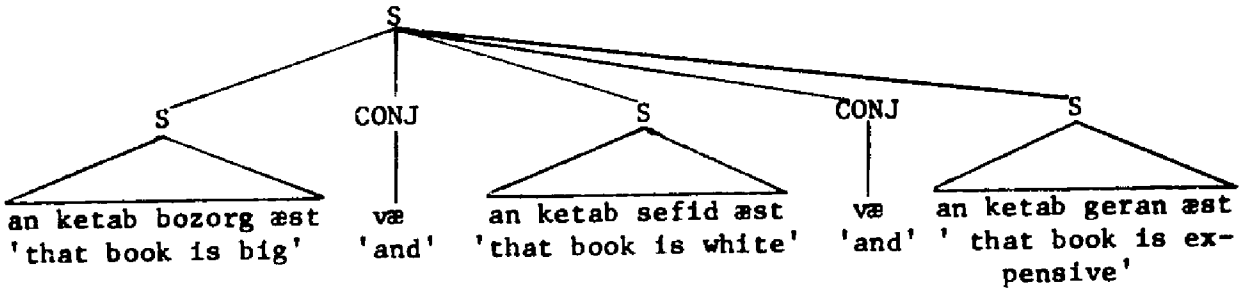
PS-8 states that S may be rewritten as S conjunction S conjunction.... This gives the following tree diagram.

(231)



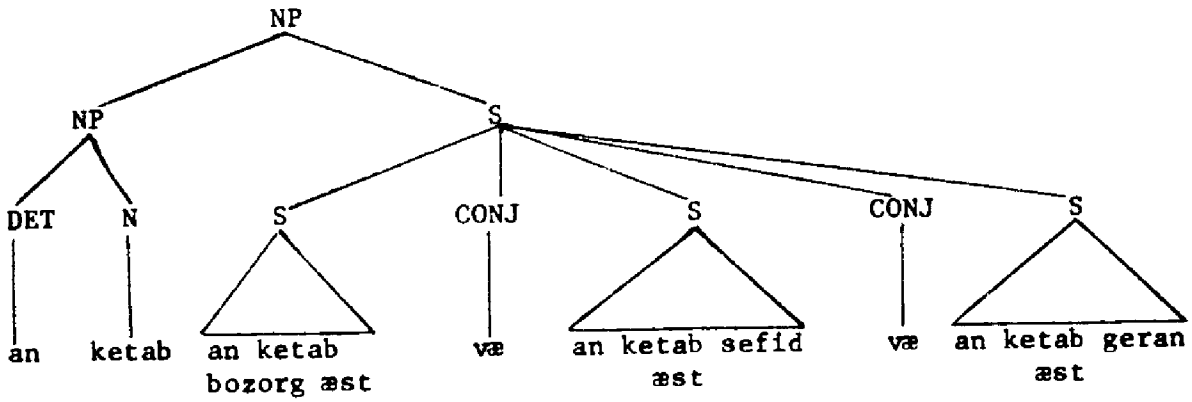
(231) underlies conjoined sentences such as the following:

(232)



PS-8 applied after PS-6 gives the deep structure underlying extended adjective E-constructions.

(233)



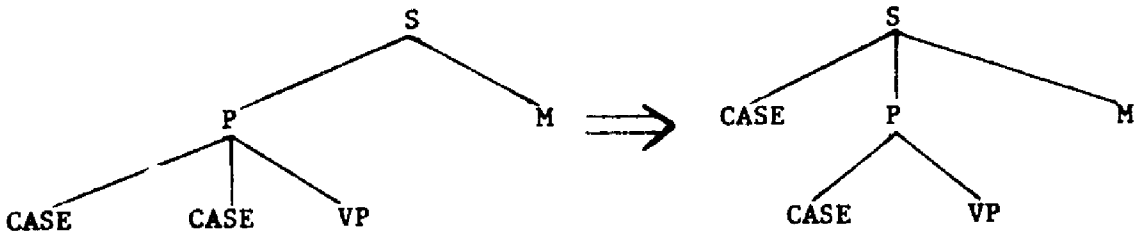
The application of the appropriate transformational rules will convert (233) into the following E-construction.

(234) an ketab-E-bozorg-E-sefid-E-geran

'that big white expensive book'

3.4 The Subject-Raising Transformation. The subject raising transformation for MSP removes a CASE from P and attaches it directly to the front of S.[8] The symbol "$\Longrightarrow$" indicates that the rule is a transformational rule.

(235)



The conditions under which a specific CASE is raised to the subject position in a sentence are specified in the sub-rules T-1a through T-1h below. These sub-rules select the particular CASE to be raised to the subject position. When the designated CASE is raised to the subject position, certain changes may be necessary in the VP constituent, such as the introduction of the copula. Rules defining these changes are called "marked" rules. All others are referred to as "unmarked" rules. These require no changes in the verb with the exception of subject-verb concord.

3.4.1.1 Unmarked Subject Raising Rules.[9]

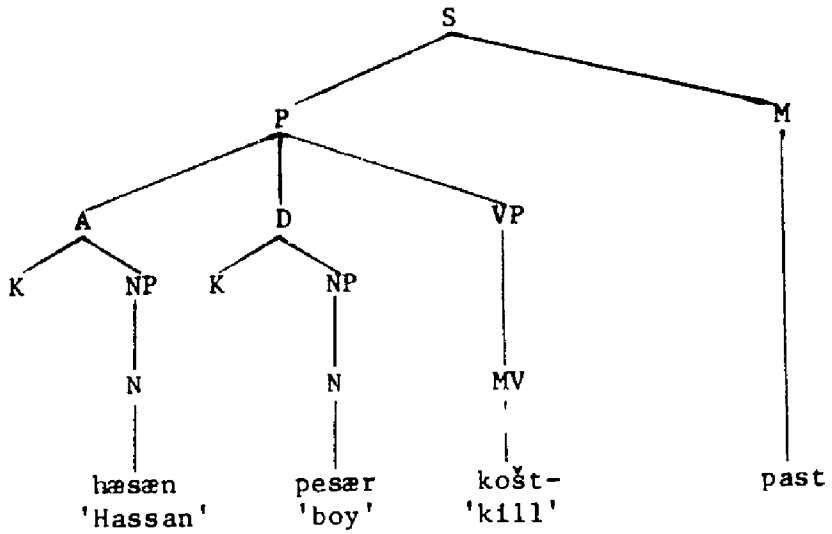
(236) T-1a If A is present in P, make A the subject.

T-1b If A is not present in P and if I is present, make I the subject.

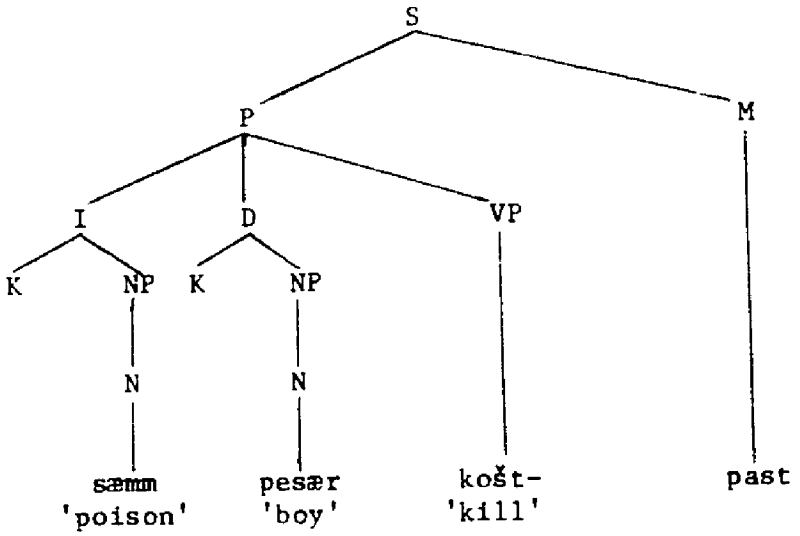
T-1c If neither A nor I is present in P, make O the subject.

The various subject raising options present with the verb /košt-/ 'kill' will illustrate the applications of the unmarked subject raising rules. /košt-/ has the following CASE frame: [(A)(I)D___]. It occurs in deep structures such as (237).

(237)

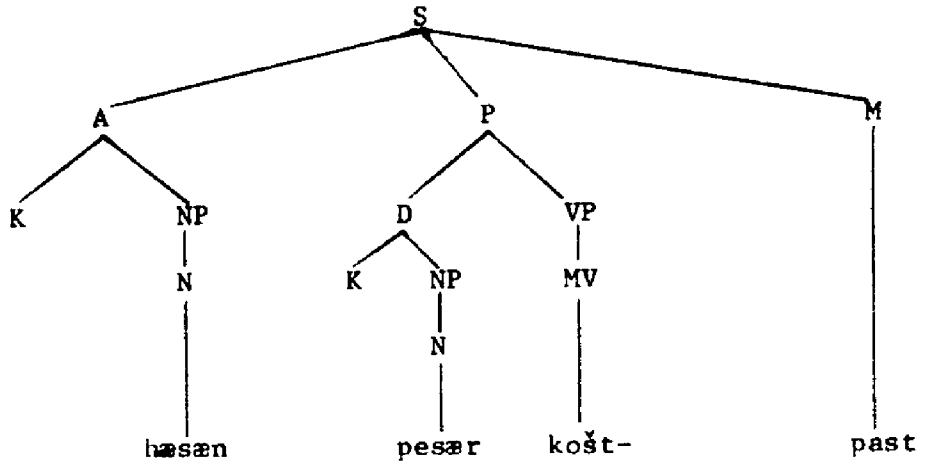


(238)



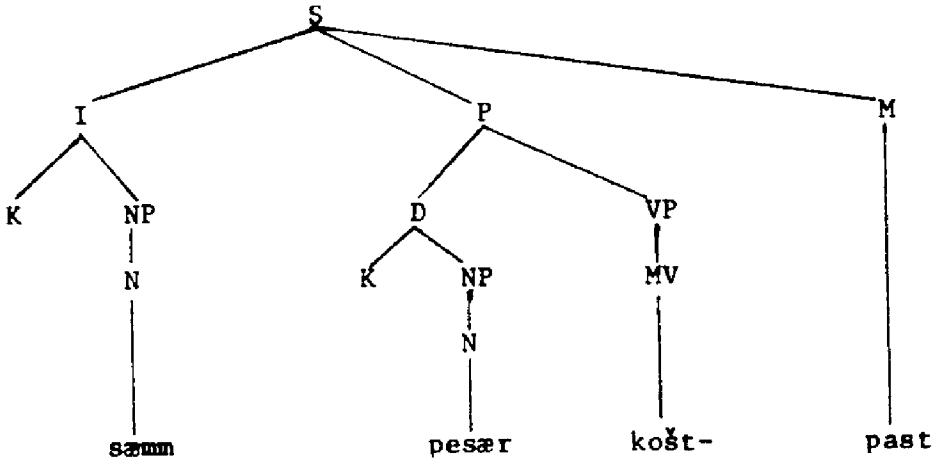
In deep structure (237) a T-1a applies since it says if A is present make A the subject. The result of the application of T-1a to (237) is the following:

(239)



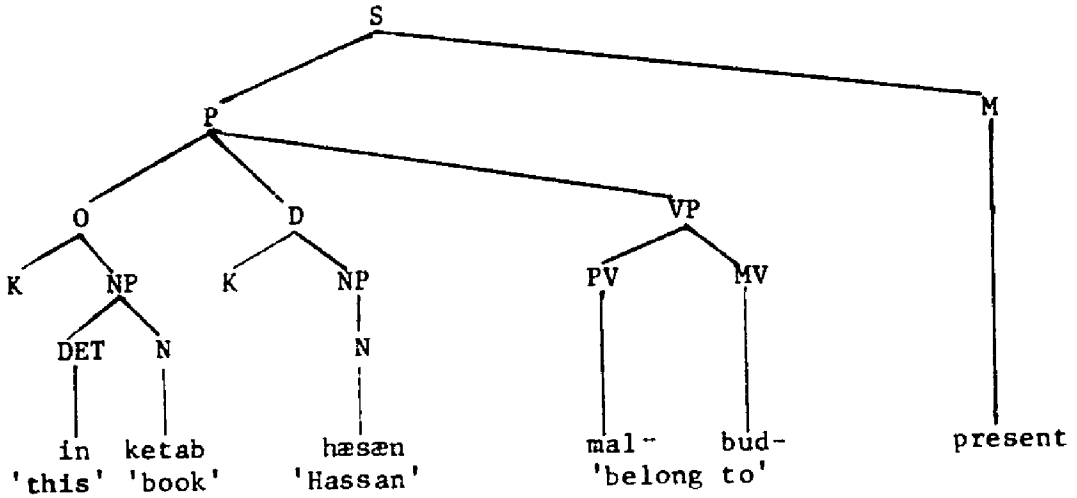
T-1b applies to deep structure (238) and the result is the following:

(240)

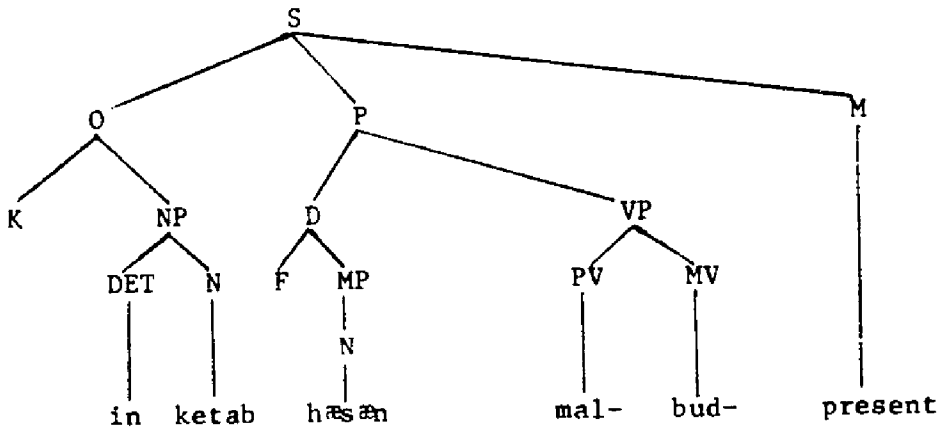


T-1c does not apply to deep structures containing the verb /košt-/, but it does apply to deep structures containing the VP /mal-bud-/ 'belong to' as illustrated in (241) and (242).

(241)



(242)



Unlike in English, there are very few, if any, verbs in MSP which allow either T-1a, T-1b, or T-1c to apply. The MSP verb phrase /baz-kærd-/ 'open' can be compared to the English verb <u>open</u> in this respect. (243-245) illustrate A, I, and O subject raising in English.

(243) John opened the door.

(244) This key opened the door.

(245) The door opened.

The VP /baz-kærd-/ does allow either an A or an I subject, but not an O subject. In (246) /dær/ 'door' is not understood as the subject.

(246) dær baz-kærd 'Someone opened the door.'

Therefore, the CASE frame for /baz-kærd-/ must require that either A or I or both be present in the proposition. This is stated as follows:

(247) baz-kærd- [(A)(I)O____]

The English verb open allows O subject raising. Its CASE frame is the following:

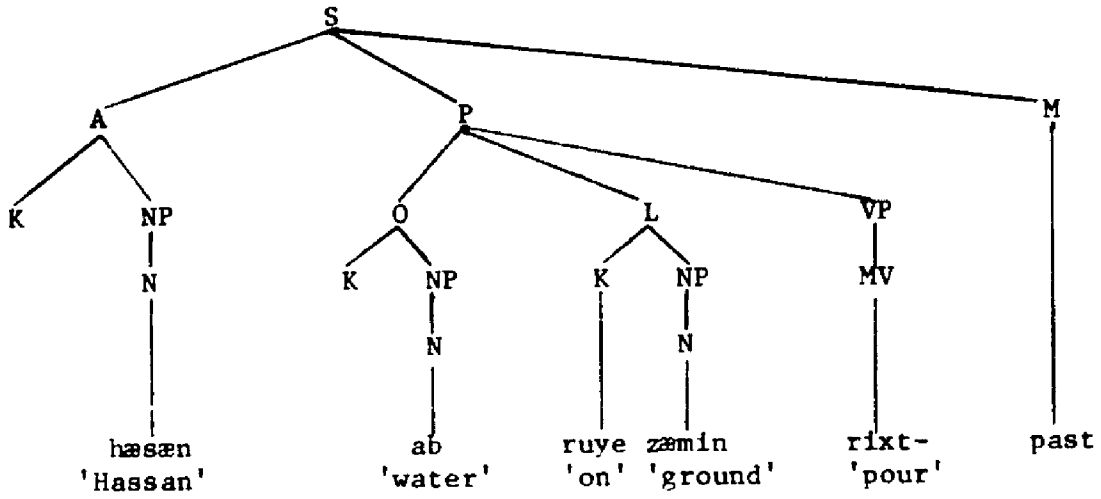
(248) open [____(A)(I)O]

Therefore, a P containing only O is permitted, and that O will be raised to subject as shown in (245) above.

The verb /rixt-/ 'pour' is one of the few in MSP which allows either A or O subject raising when the verb is used transitively. The CASE frame for /rixt-/ is given in (249). The two types of subject raising are illustrated in (250-251).

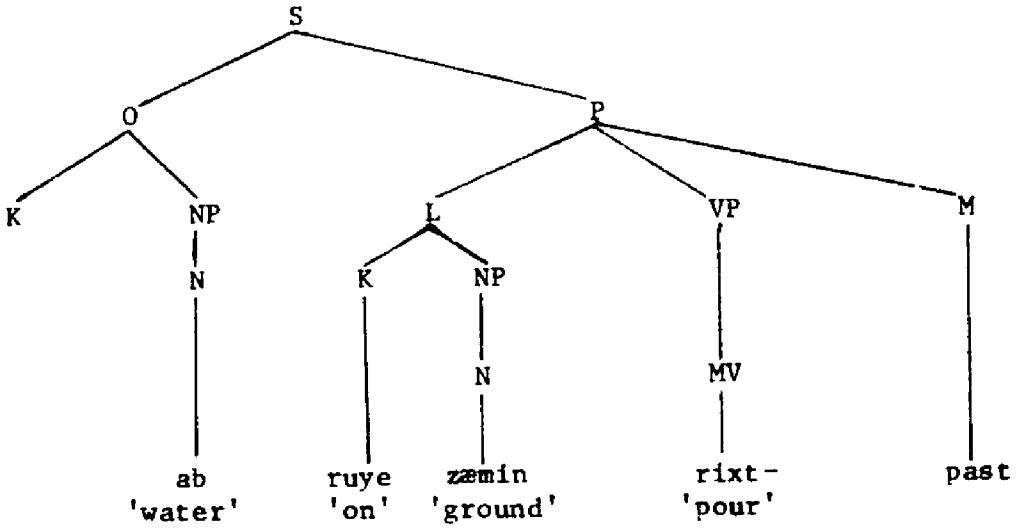
(249) rixt- [(A)OL____]

(250)



'Hassan poured water on the ground.'

(251)



'The water poured on the ground.'

3.4.2 Marked Subject Raising Rules Requiring Passivization.

(252) T-1d Given a proposition containing A O D, make O the subject.

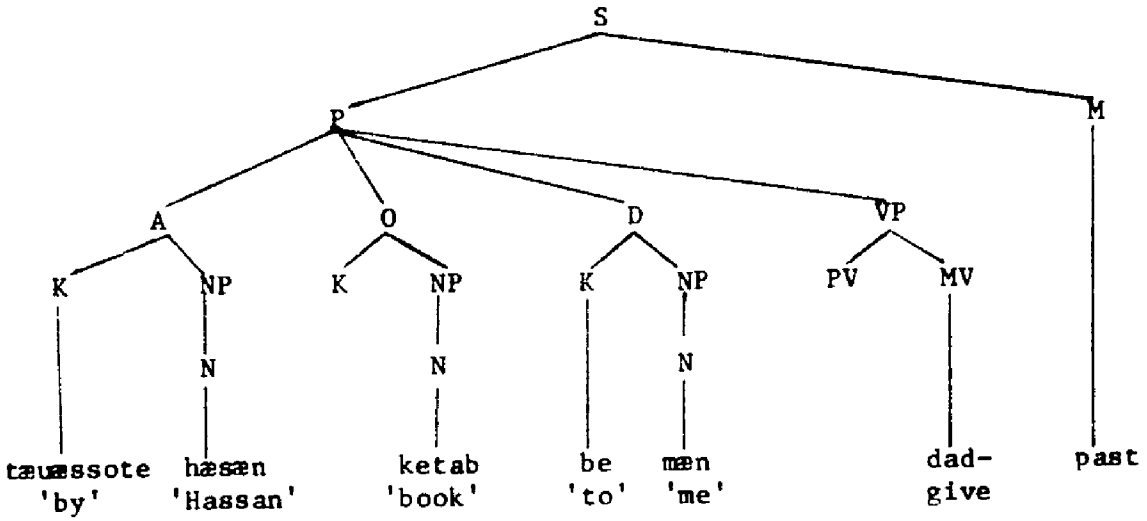
T-1e Given a proposition containing A D or I D, make D the subject.

(253-254) illustrate the application of T-1d to a MSP deep structure. The resulting sentence is:

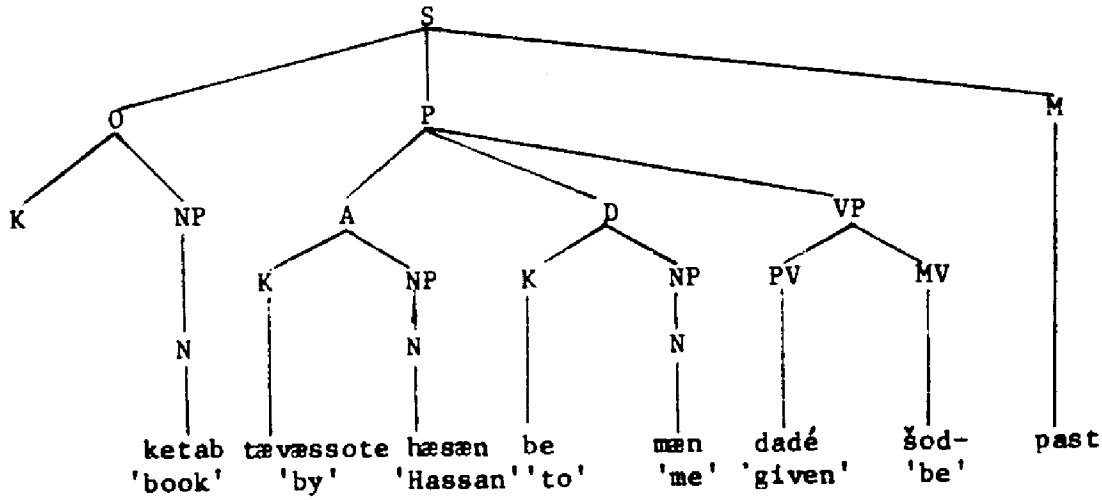
/ketab-ra tævæssote hæsæn be mæn dadé-šod/

'The book was given to me by Hassan.'

(253)

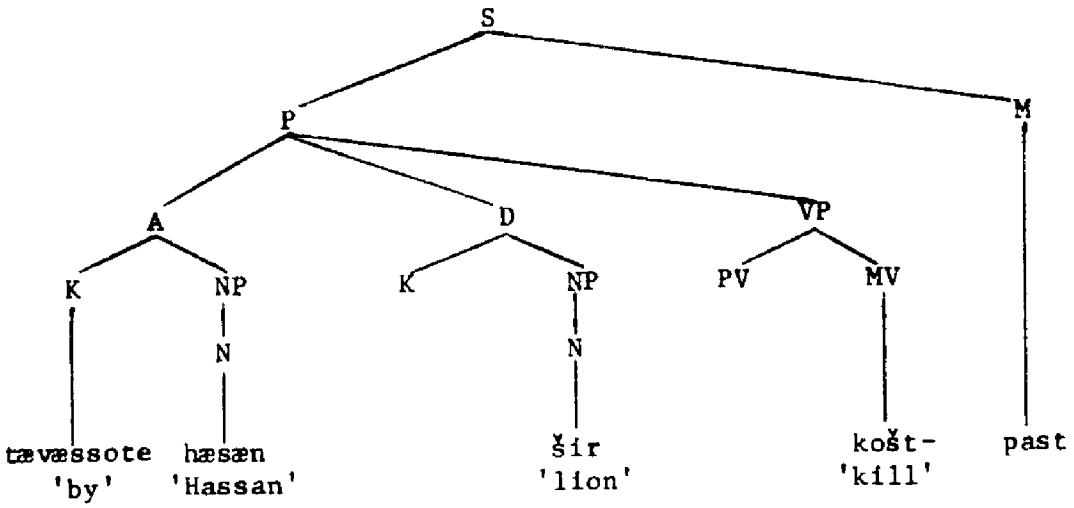


(254)

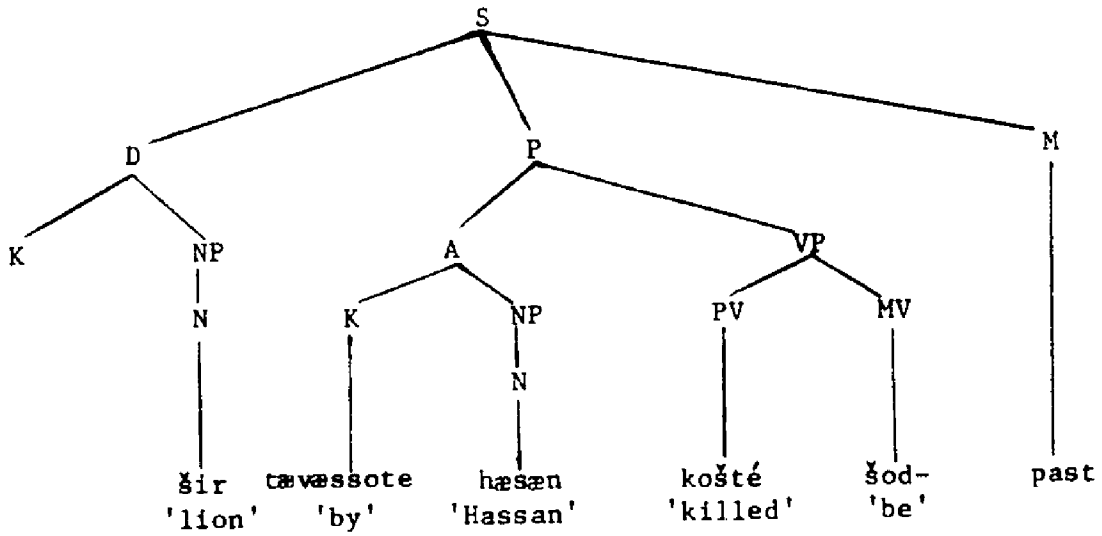


(255-256) illustrate the application of T-1e to a MSP deep structure. The resulting sentence is: /šir-ra tævæssote hæsæn košte šod/ 'The lion was killed by Hassan.'

(255)



(256)



Secondary passivization in MSP, unlike in English, is not allowed. In English the sentence, John gave the boy a book, has two passives. In primary passivization the O NP is raised to subject giving: A book was given to the boy by John. In secondary passivization the D NP is raised to subject: The boy was given the book by John. If secondary passivization is attempted in MSP the resulting construction is incorrect.

(257) *mæn ketab-ra tævæssote hæsæn dadé-šodæm

In the MSP examples of passivization above, two changes are made in the VP. The MV is moved to the PV position and changed into its participial form, and the auxiliary verb /šod-/ is introduced under the vacated MV label. This is done for two reasons. First, the conjugated verb in the sentence is /šod-/. Second, the participle is an adjectival form of the verb stem and it can be used in situations where an adjective would be equally correct.

(258) hæsæn ræfté-æst 'Hassan is/has gone.'

(259) hæsæn bahuš æst 'Hassan is intelligent.'

(260) doxtær-E-aftab-suxté 'the sunburned girl'

(261) doxtær-E-ziba 'the beautiful girl'

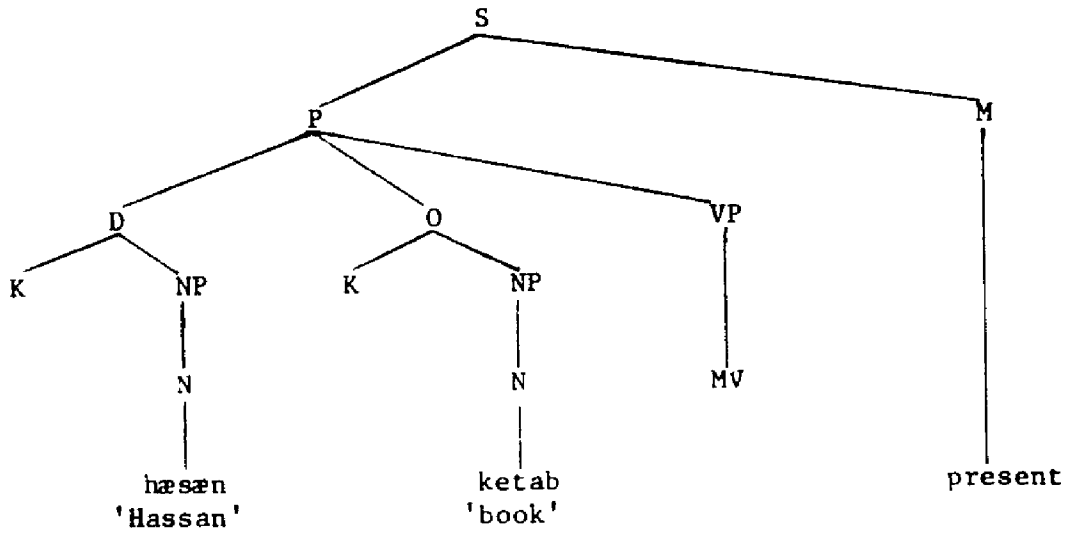
/bud-/ and /šod-/ reflect the active/passive voice distinction. This is consistent with the assumption that voice is determined by the subject raising rules and is not marked in deep structure (as are tense and aspect distinctions under M).

3.4.3 Marked Subject Raising Rule Requiring the Introduction of /dašt-/ into the MV Constituent.

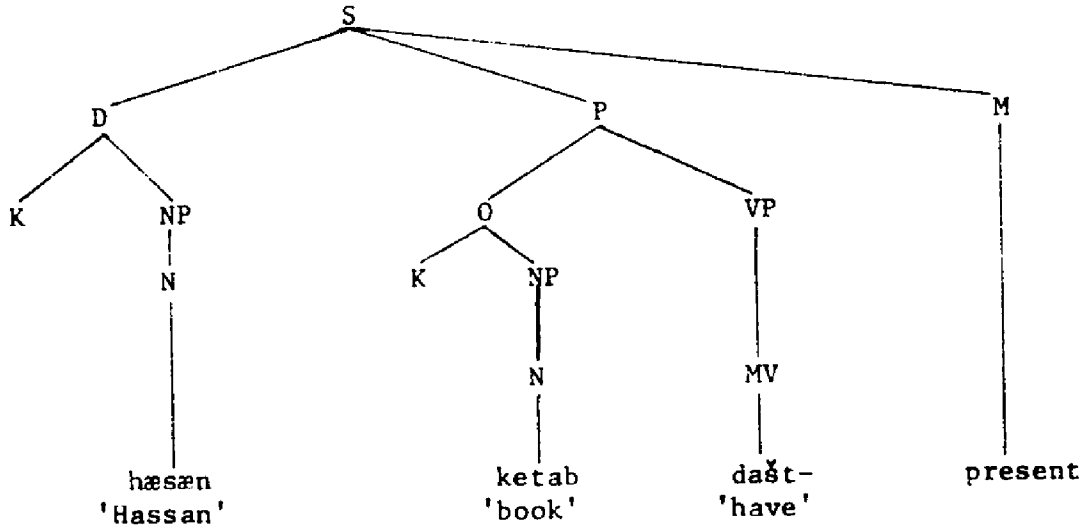
(262) T-1f Given D or L in the proposition when O is also present, make either D or L the subject and introduce /dašt-/ into the empty MV.

(263-264) illustrate the application of T-1f to a MSP deep structure. The resulting sentence is: /hæsæn ketab daræd/ 'Hassan has a book'.

(263)



(264)

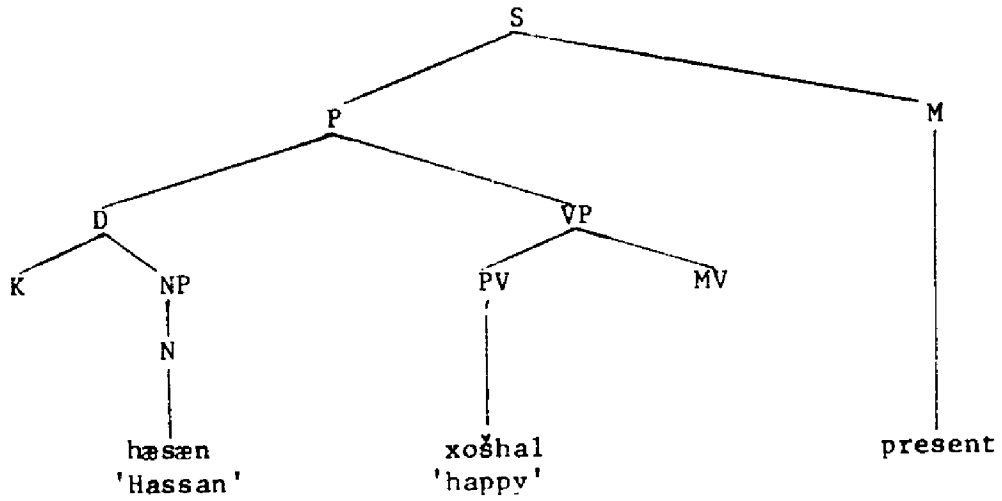


3.4.4 Marked Subject Raising Rule Requiring the Introduction of /bud-/ into the MV Constituent.

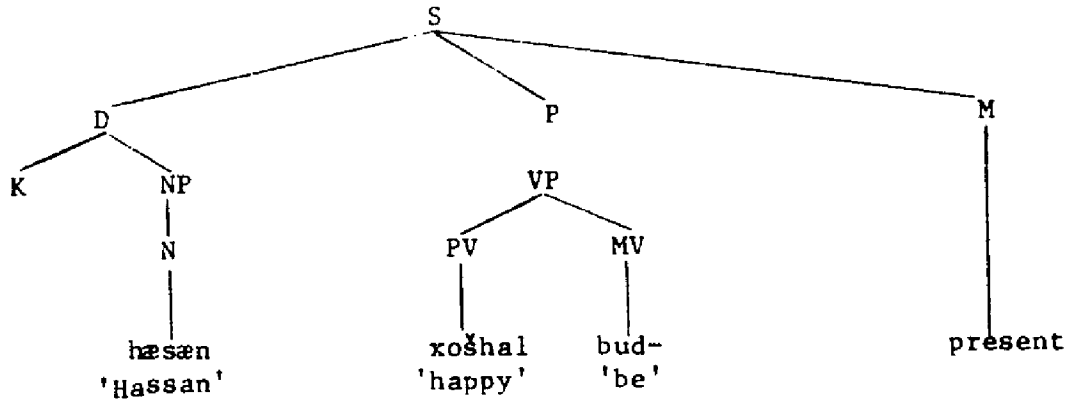
(265) T-lg Given only one CASE in P, raise that CASE to the subject position, or given O in P when either D or L is also present, make O the subject. Introduce /bud-/ into the empty MV.

(266-267) illustrate the application of T-1g to a MSP deep structure. The resulting sentence is: /hæsæn xošhal æst/ 'Hassan is happy.'

(266)



(267)



3.4.5 Final Marked Subject Raising Rule. The final marked subject raising rule is needed to handle exceptions to T-1a through T-1g. It raises a specifically marked CASE to subject if T-1a through T-1g would result in an incorrect construction.

(268) T-1h If a specific CASE is marked for subject raising in the CASE frame of a particular verb, then make that CASE the subject.

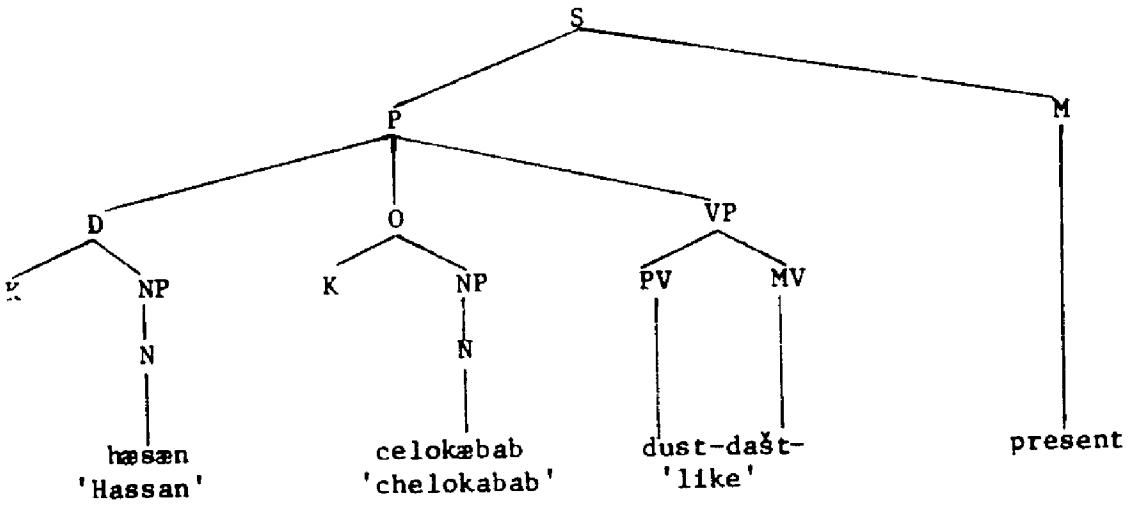
A VP to which T-1h applies is /dust-dašt-/'like'.

(269) dust-dašt

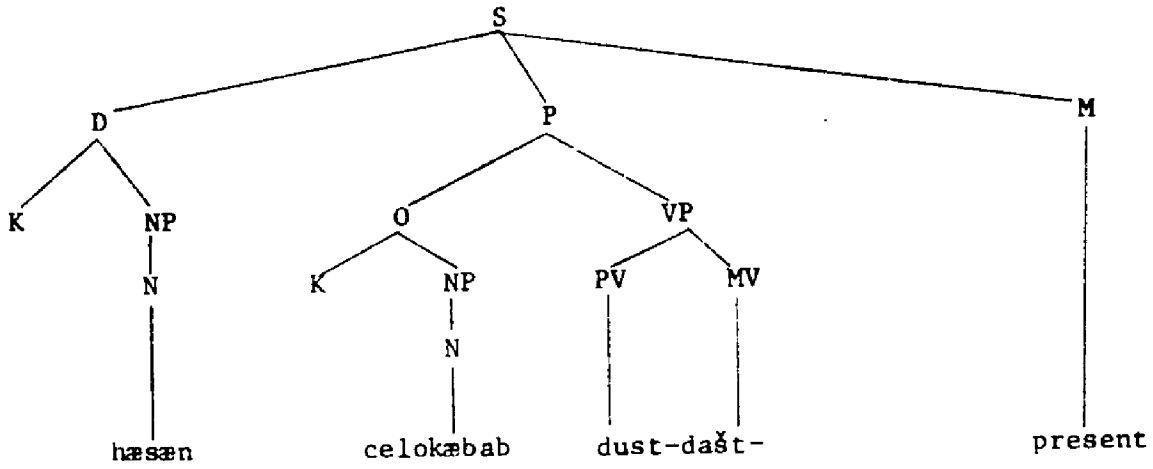
D O ___
raise O to subject

(270-271) illustrate the application of T-1h to a MSP deep structure. The resulting sentence is: /hæsæn celokæbab-ra dust-daræd/ "Hassan likes 'chelokabab'."

(270)



(271)



FOOTNOTES

CHAPTER THREE

[1]The optional CASE in PS-4 will be discussed in detail in Chapter Six.

[2]In this study I do not consider /-ra/ to be a CASE marker.

[3]For a discussion of inalienable possession, see Fillmore 1968, pp. 61-81, and also Chapter Six.

[4]The syntax of preverbs is discussed in Jazayery and Paper 1961, pp. 200-201.

[5]Fillmore 1968, p. 27.

[6]Cf. Section 3.4.4.

[7]Cf. Chapter Four, p. 76.

[8]This rule for MSP is equivalent to that proposed for English by Fillmore 1968, p. 34.

[9]Many of the subject raising rules are equivalent to Fillmore's rules for English. It is interesting to speculate whether this is due to real similarities between the two languages or to the fact that a single linguistic model is used to describe both languages.

CHAPTER FOUR

THE RELATIVE CLAUSE AND ADJECTIVAL EZAFE CONSTRUCTIONS

4.1 Transformation Rules. In this chapter I will show that the transformations used to convert deep structures into relative clauses are part of the set required to derive the E-constructions. The following are the transformational rules I will use. They will be illustrated and explained as they are used. The T-rules below are numbered to be consistent with the order of their application in Persian. The T-rules not included in this list (T 6-13) are discussed in later chapters.

(272) T-1 Subject raising rules[1]

T-2 Identical noun copy

T-3 Identical noun $\Longrightarrow$ /ke/

T-4 Identical noun pronominalization

T-5 /ke/ $\Longrightarrow$ E

T-14 Identical noun deletion

T-15 M and MV deletion

T-16 Structure reduction

T-17 Final rules

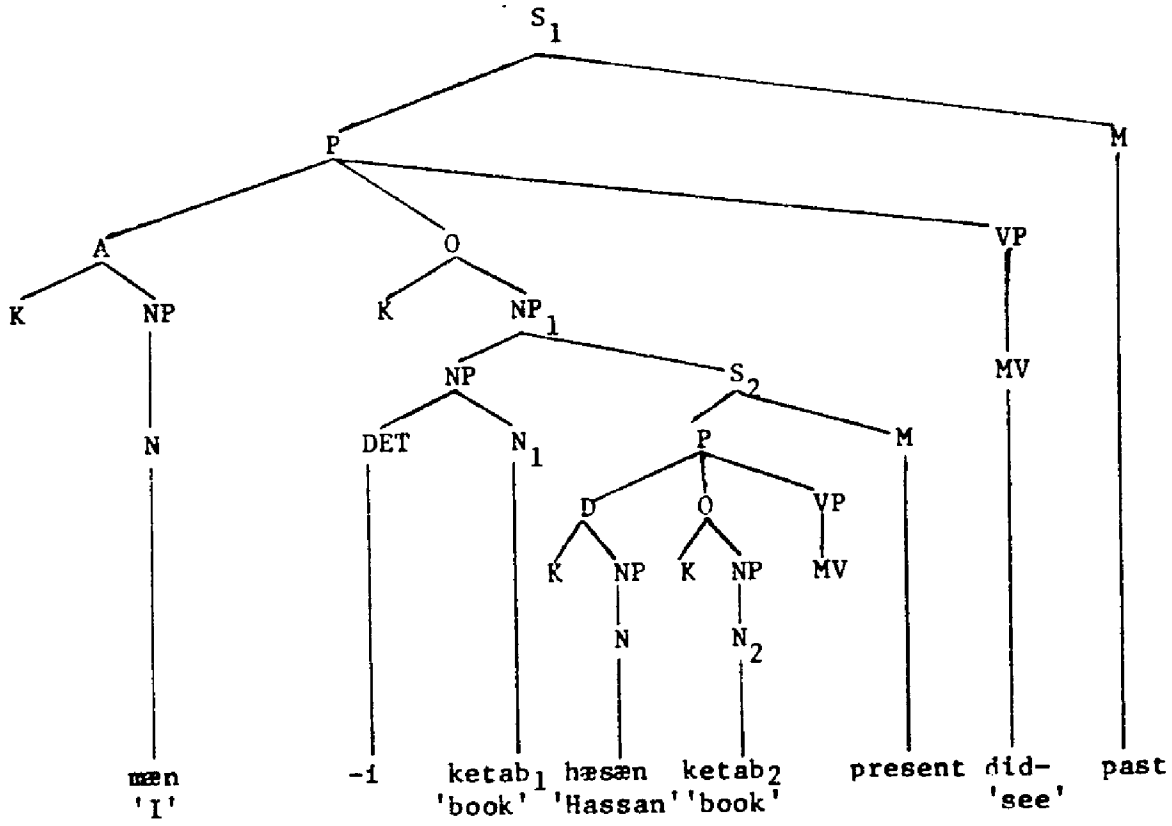
4.2 The Relationship Between the Sentence, the Relative Clause, and the E-Construction. The E-construction discussed in this chapter represent the last stage of the nominalization process. The total nominalization process basically consists of a two-step reduction of

constituent structure. The initial condition for this process is the presence of the symbol S embedded in a NP. This condition results from the application of rule PS-6: NP⟶ NP S.[2] The following tree diagram shows the deep structure of sentence (273). The subscripts in the tree diagram are used for reference purposes. N_1 and N_2 will have identical referents in all future examples.

(273) mæn ketab-i-ra ke hæsæn daræd didæm

'I saw the book which Hassan has.'

(274)



In (274), S_2 is embedded in NP_1, and NP_1 is a constituent of S_1. S_2 contains the deep structure underlying the following sentence.

(275) hæsæn ketab-ra daræd 'Hassan has a book.'

S_1 contains the deep structure underlying (276) as well as the deep structure underlying (275).

(276) mæn ketab-ra didæm 'I saw the book.'

By a reduction in structure involving the pronominalization of the identical noun /ketab$_2$/, the first stage of nominalization is reached.

(277) mæn ketab-i-ra ke hæsæn daræd didæm
'I saw the book which Hassan has.'

The E-construction, which is the second stage of nominalization, results when the structure underlying (277) is further reduced by the deletion of the MV and M constituents from the relative clause.

(278) mæn ketab-E-hæsæn-ra didæm 'I saw Hassan's book.'

The MV /dašt-/ and the modality information (present tense) which determine the selection of the present stem of the verb /dar-/ in (277) are both missing in (278). In summary, under certain conditions at the deep structure level, such as the identity of N_2 and N_1 in (274), a sentence embedded in a NP can be reduced to a relative clause. When other conditions exist, such as the presence of the verb /dašt-/ in the MV of S_2 after subject raising, the MV and M constituents of the relative clause may be deleted and the remaining structure converted into an E-construction.

4.3 Restrictive and Non-Restrictive Relative Clauses. There are two types of relative clauses in MSP, restrictive and non-restrictive. The restrictive relative clause specifies one out of a class of similar, but distinct objects. In a restrictive relative clause such as (279), the book denoted by the head noun /ketab/ is differentiated from other similar books in that it is possessed by Hassan.

(279) ketab-i-ra ke hæsæn daræd geran æst
'The book that Hassan has is expensive.'

In (279), the book which Hassan has is implicitly part of the class of other books which are not possessed by him. Similarly, the hand referred to in (280) must be understood as belonging to the larger class of "hands," rather than being Hassan's, if we use this restrictive relative clause construction.

(280) dæst-i-ra ke hæsæn daræd kæsif æst
'The hand that Hassan has is dirty.'

Because of the logical inconsistency in referring to body parts using the restrictive relative clause construction, we must use a non-restrictive relative clause instead. This is illustrated in (281).

(281) hæsæn dæst-i daræd ke kæsif æst
'Hassan has a hand that is dirty.'

Nouns such as /ketab/ 'book', which are not body parts, can also occur as head nouns in non-restrictive relative clauses.

(282) hæsæn ketab-i-ra daræd ke geran æst

'Hassan has a book that is expensive.'

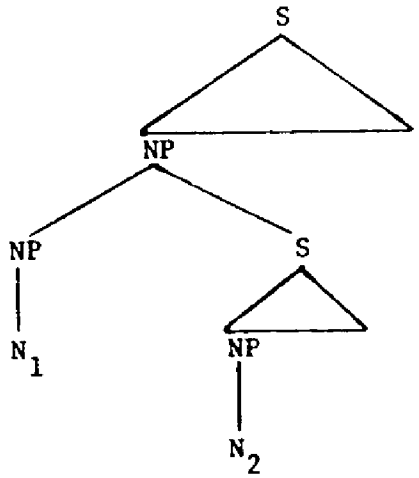
Sentences containing non-restrictive relative clauses have the additional property that they can be paraphrased as two conjoined sentences.

(283) hæsæn ketab-ra daræd væ an ketab geran æst

'Hassan has a book and that book is expensive.'

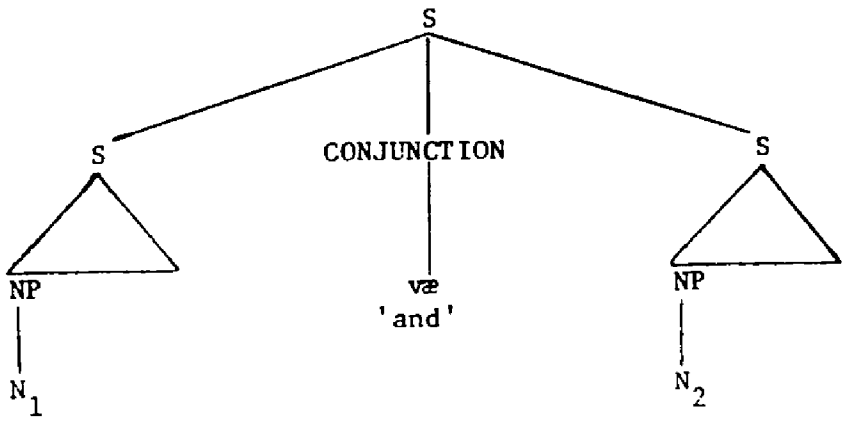
The conjoined sentence /væ an ketab geran æst/ is a comment on a book of Hassan's, but there is no reference, either implicitly, as in (279), or explicitly, to other books. This I believe is the essential difference between a non-restrictive and a restrictive relative clause. The following diagrams (284-285) show the distinction between restrictive and non-restrictive relative clauses in deep structure. Example (284) illustrates the deep structure underlying restrictive relative clauses.

(284)



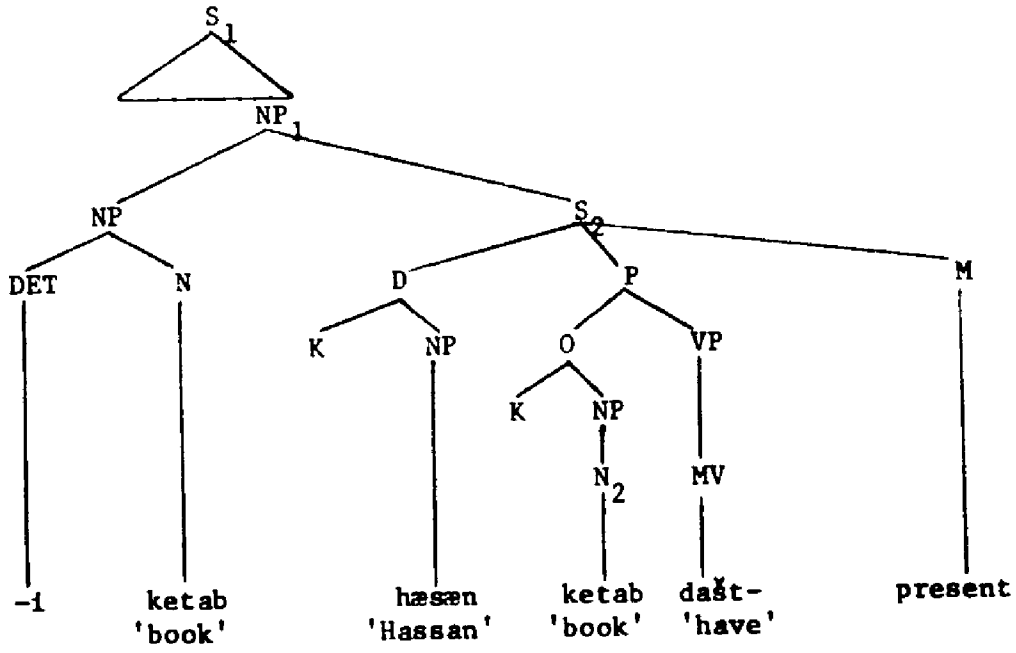
Example (285) illustrates the deep structure underlying non-restrictive relative clauses.

(285)



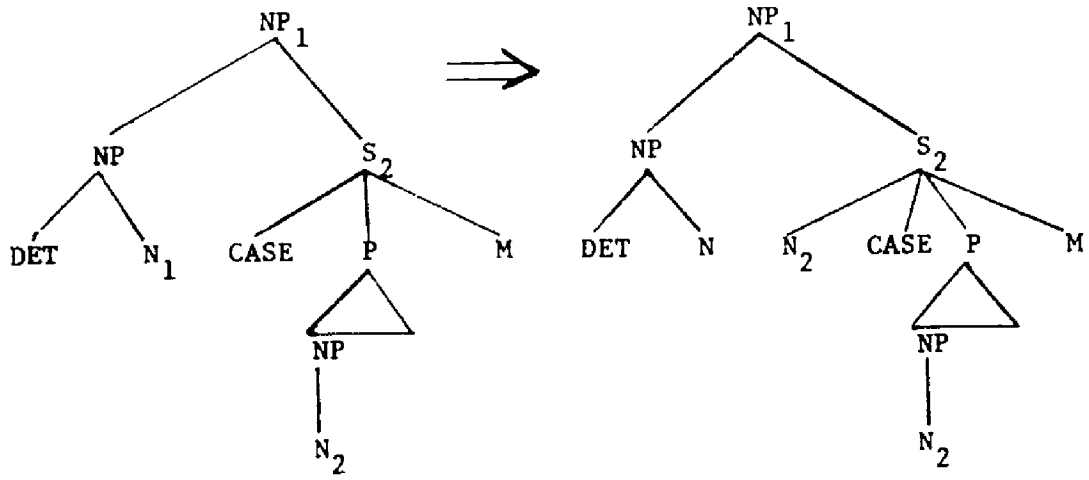
4.3.1 The Derivation of Restrictive Relative Clauses. The following derivation illustrates how the surface structure of (277) is derived from DS (274) above. The T-rules are first applied to the embedded sentence S_2, and then to the top-most sentence S_1. The first rule to apply to S_2 is T-1 (subject raising).

(286)



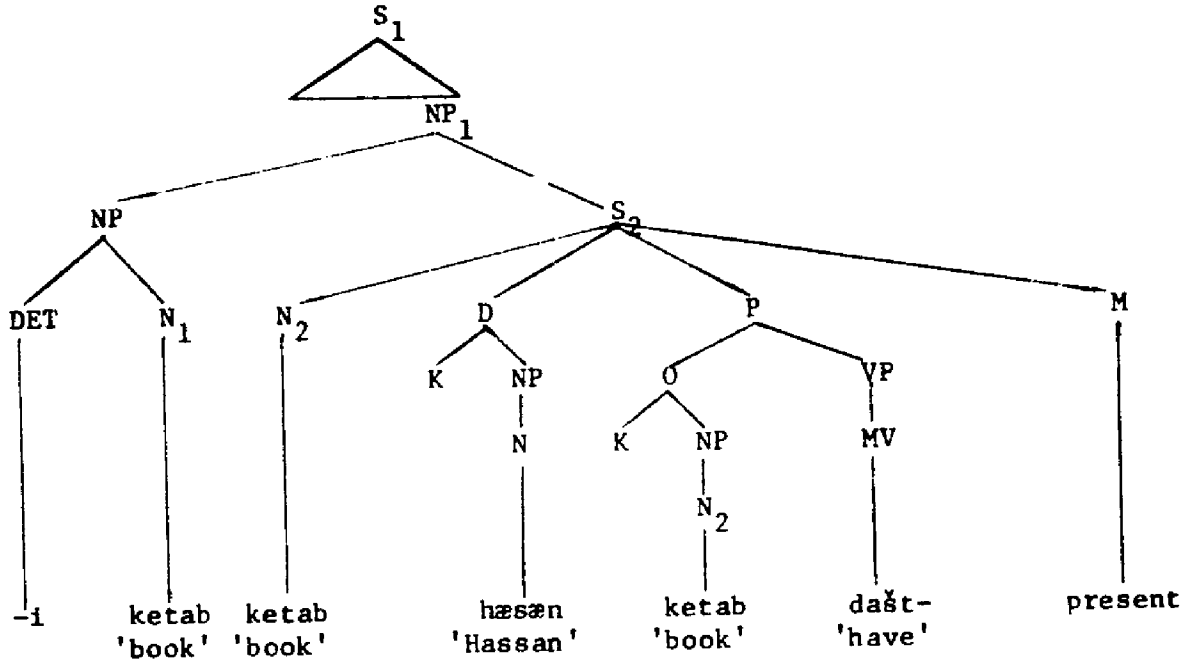
The second rule to apply is T-2 (identical noun copy). T-2 copies the identical noun N_2 at the front of the embedded sentence when the identical noun is not the subject. In embedded sentences in which the identical noun is the subject, it will already have been moved to the front of the embedded sentence by T-1 (subject raising). In such cases T-2 will not apply. The structural change specified by T-2 is illustrated in (287).

(287)



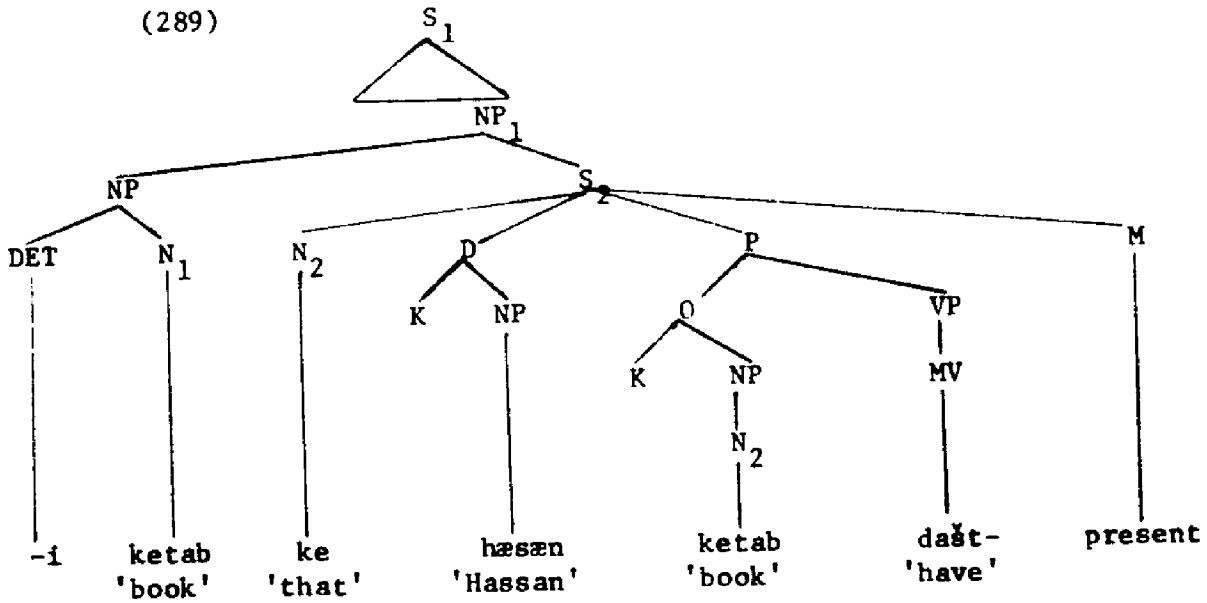
The copied noun is the source of the relative pronoun /ke/ which always precedes the remainder of the embedded sentence. T-2 applied to (286) gives the following tree:

(288)



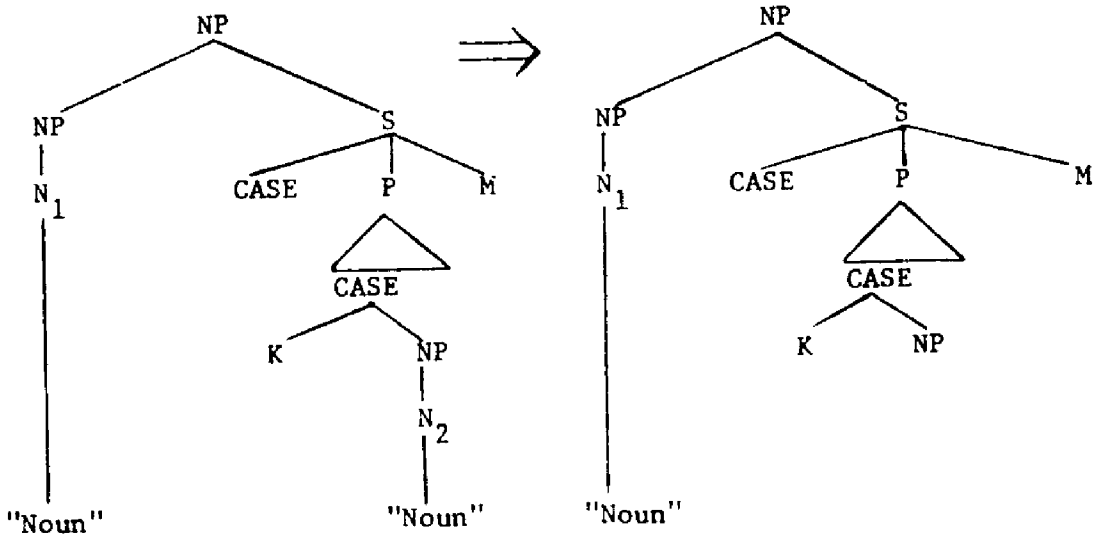
T-3 pronominalized the identical noun at the front of the embedded sentence. The pronominal form is the relative pronoun /ke/. This rule accounts for the fact that the relative pronoun is understood to refer to the identical noun in the embedded sentence. The structural change resulting from the application of T-3 is illustrated in (289).

(289)



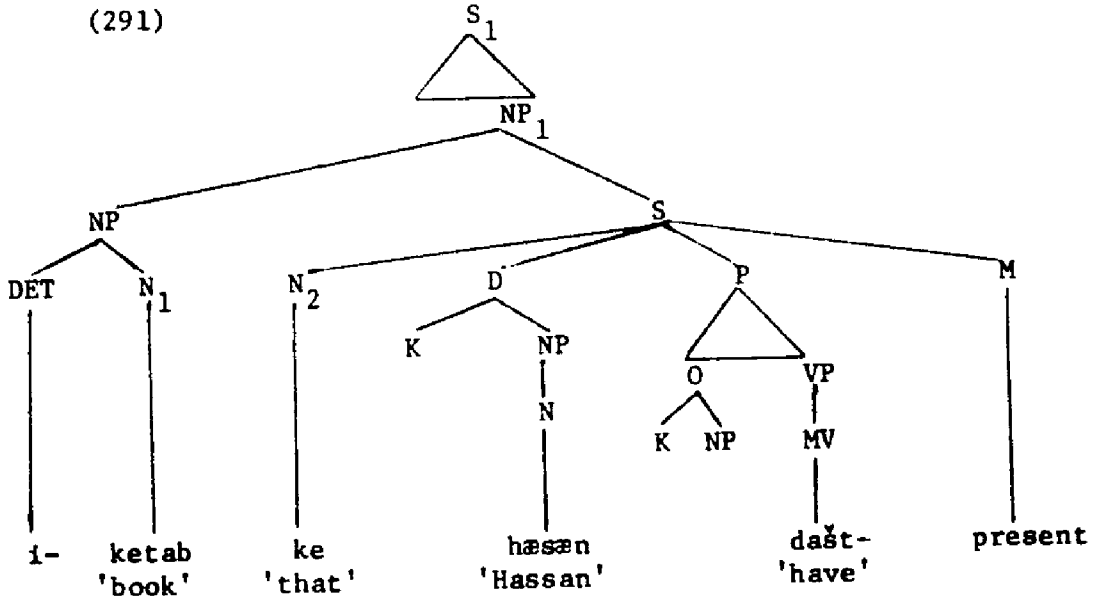
T-4 and T-5 do not apply in this derivation. T-14 deletes a non-pronominalized identical noun in P.[3] The rule makes the following structural change in a tree containing a noun in P (N_2) which is identical to the head noun (N_1).

(290)



T-14 applied to (289) gives the following tree:

(291)



T-15 does not apply to structures such as (291). T-16 is a rule which deletes structures under the following conditions:

(292) T-16 Delete any label which does not satisfy the following conditions:

a. A terminal symbol (final symbol in a tree) must dominate a word or morpheme.

b. A label cannot dominate an identical label.

c. NP must dominate N and some other constituent.

d. CASE must dominate K and either NP or N.

e. VP must dominate FV and MV.

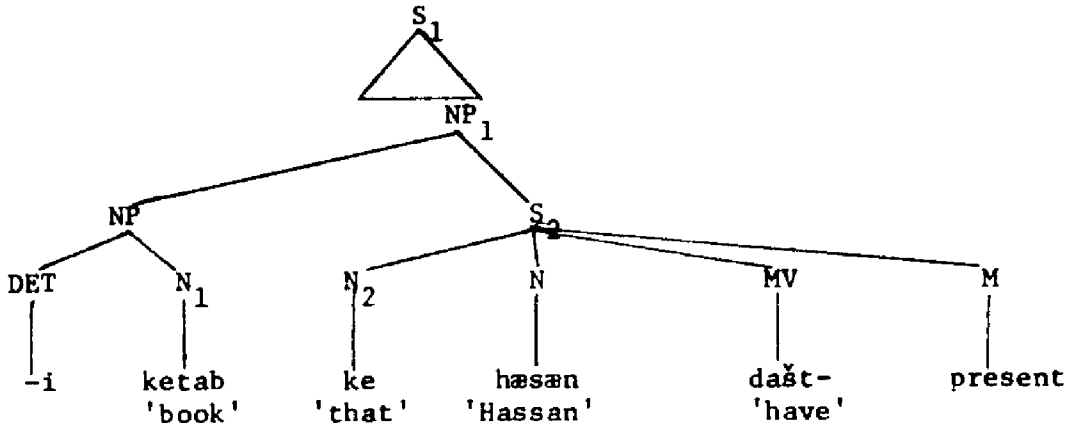
f. P must dominate CASE and either VP or MV.

g. S must dominate M and either VP or MV.

T-16 insures that surface structures have reasonable constituent structures. Without T-16, for example, surface structures would contain constituent labels which lack lexical realization.

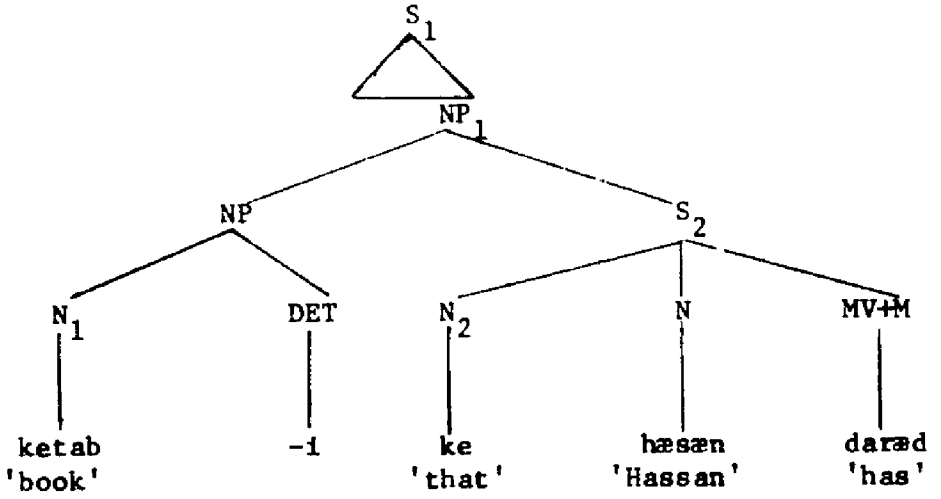
(291) contains several violations of T-16. The K under D and O does not dominate a word or morpheme and must be deleted. The NP under O does not dominate N and some other constituent, therefore it must be deleted. This deletion leaves the O empty, so it also must be deleted. This deletion leaves P not dominating a CASE, so P must be deleted. After all of these deletions are made by T-16, the following structure remains:

(293)



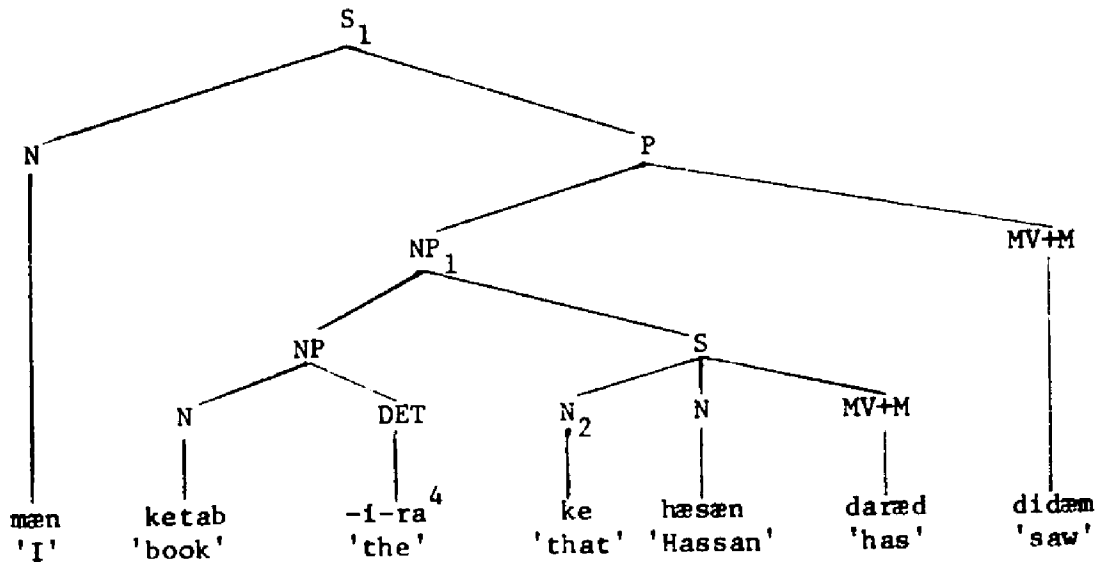
The final set of rules (T-17) switches the order of the determiner and the noun, incorporates the information of M (such as tense and aspect) into the MV, and provides for subject-verb concord. These rules are not relevant to the general goals of this study, and they will not be stated explicitly. Only the results of the application of T-17 will be given. The notation MV + M will be used to indicate that the information in M has been incorporated into the MV constituent. After applying T-17 to (293) the following tree results:

(294)



NP_1 is contained in S_1 (see 274). Therefore, the transformational rules apply again to the deep structure of S_1. Applying T-1, T-16, and T-17 gives the surface structure for (277).

(295)



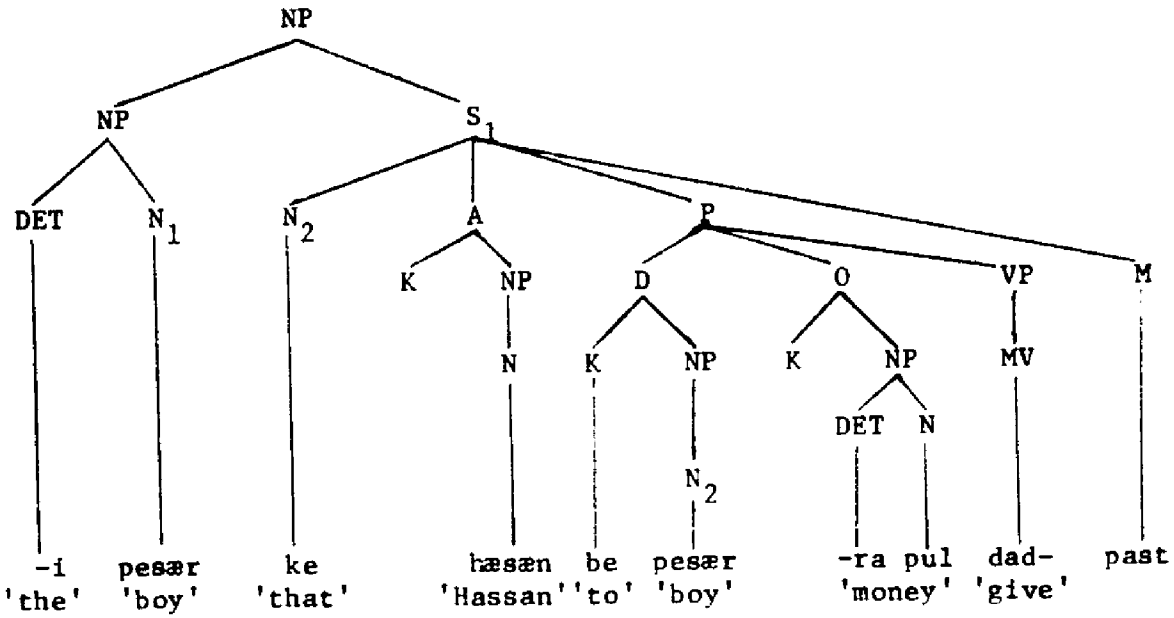
When the repeated noun in a relative clause is dominated by a CASE which is marked by a preposition, then the repeated noun must be pronominalized. In example (296) the pronoun /-eš/ 'him' is a pronominalized form of /pesær/ 'boy'.

(296) pesær-i ke hæsæn be-eš pul-ra dad mord

'The boy that Hassan gave money to died.'

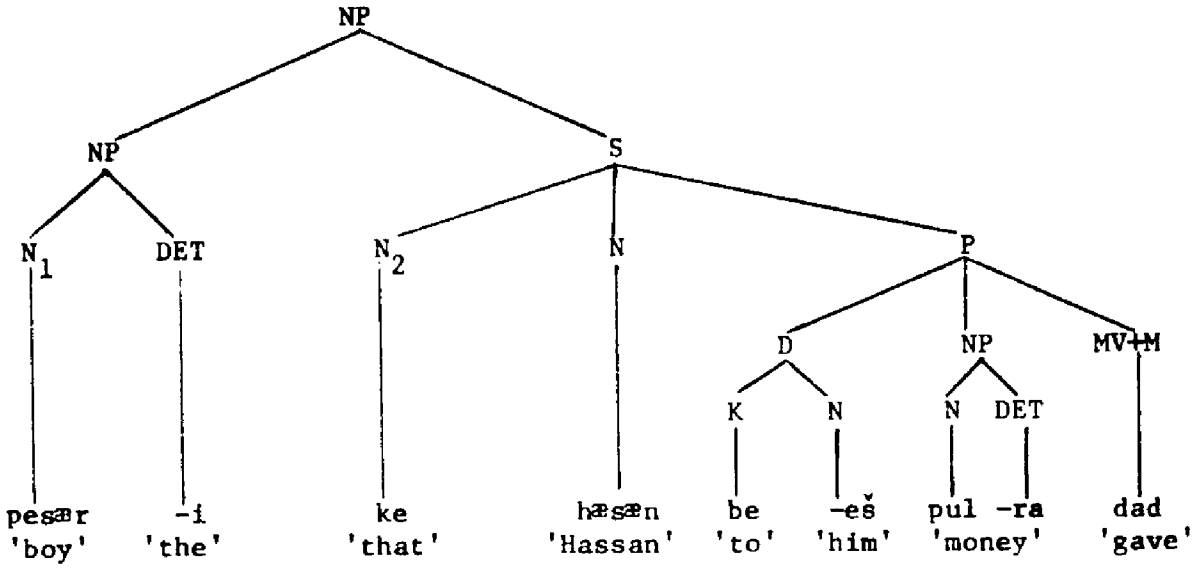
The structure of the restrictive relative clause in (296) after T-1 through T-3 have applied is the following:

(297)



T-4, the rule for identical noun pronominalization, applies to structures such as (297) by requiring an identical noun which is in the proposition of an embedded sentence to be pronominalized if the noun is preceded by a preposition. In (297) N_2 /pesær/ is preceded by the preposition /be/ 'to'. Therefore, /pesær/ is changed to the third person singular pronominal suffix /-eš/. This change, and those required by T-16 and T-17, are shown in (298).

(298)



4.3.2 The Derivation of a Non-Restrictive Relative Clause.

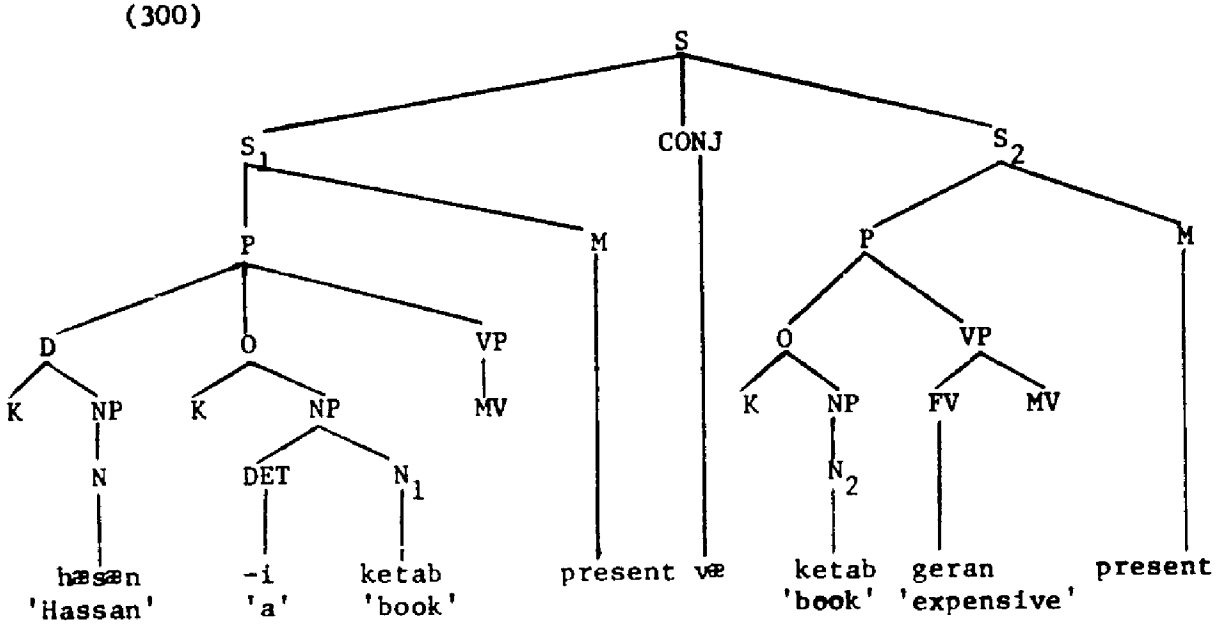
The following example illustrates the derivation of a sentence containing a non-restrictive relative clause.

(299) hæsæn ketab-i daræd ke geran æst

'Hassan has a book which is expensive.'

The deep structure of (299) is the following:

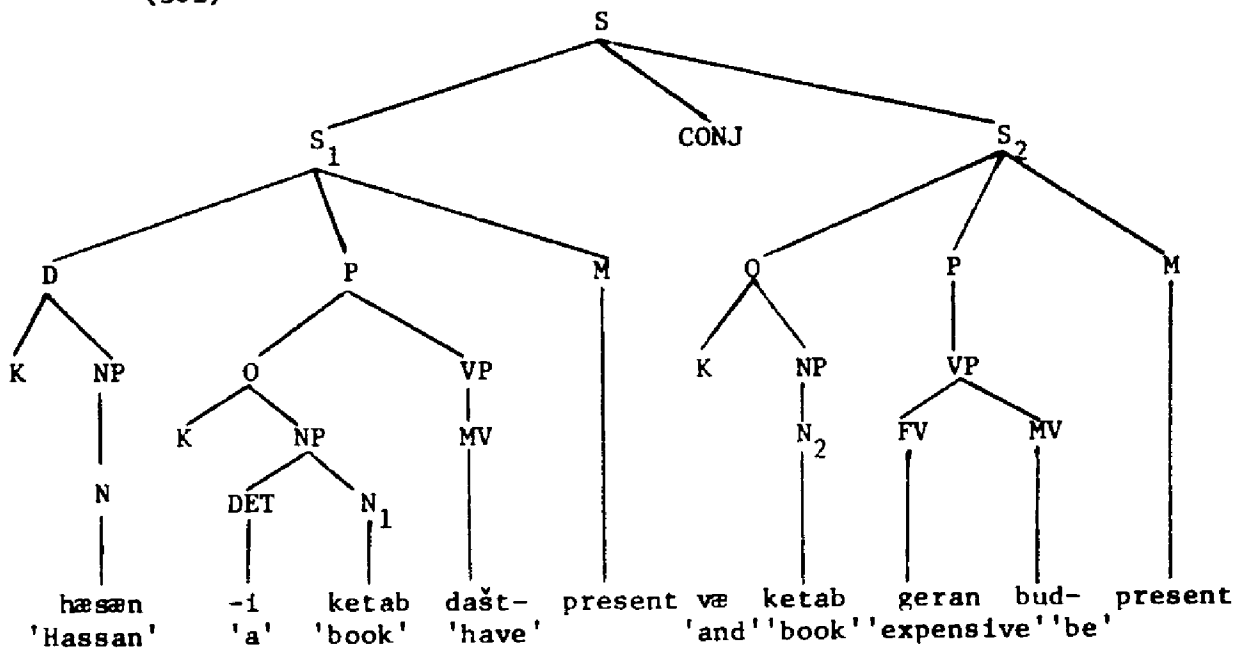
(300)



In (300), S_2 is not embedded in S_1 as was true in the structure of a restrictive relative clause. Here, the deep structure consists of two conjoined sentences containing identical nouns, thereby illustrating the relationship between the conjoined sentences and non-restrictive relative clauses.

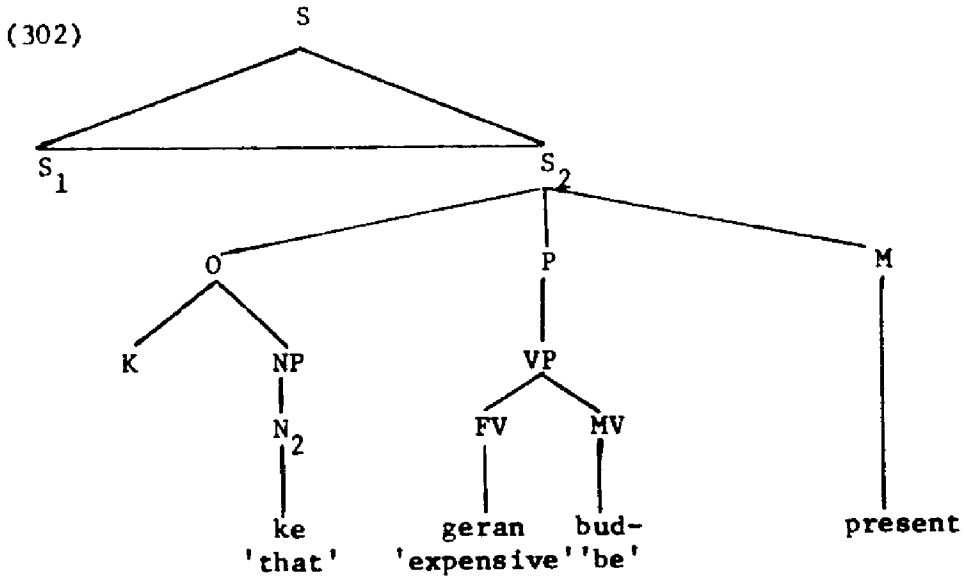
T-1 (subject raising) is applied to both S_1 and S_2, the result being the structure in (301).

(301)



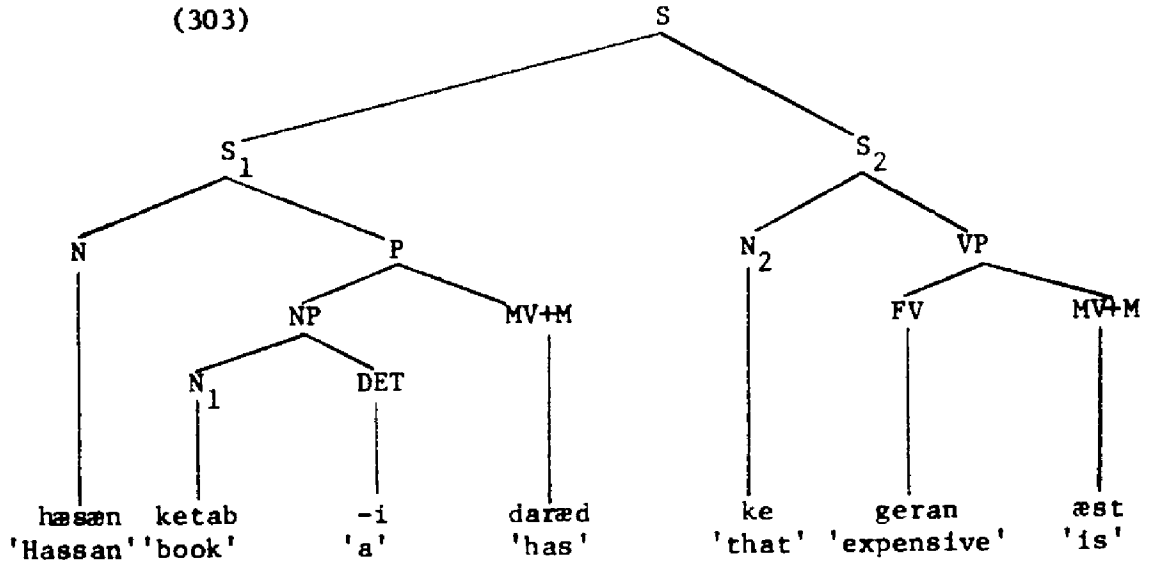
Since the identical noun (N_2) is the subject of S_2, rule T-2 does not apply.[5] T-3 does apply and pronominalizes the repeated noun to /ke/. The conjunction /væ/ 'and' is also deleted. These changes in S_2 are shown in (302).

(302)



T-16 and T-17 apply to (302) giving the following surface structure:

(303)



4.4 E-Constructions from Reduced Relative Clauses. There are two types of E-constructions which result from the reduction of a relative clause by the deletion of the MV and M constituents. In the first type, the deleted MV is /dašt-/ 'have'.

(304) madær-E-bæcce dær bæqæl 'mother with child in arms'

(304) can be paraphrased as a relative clause, showing the presence of the verb /dašt-/.

(305) madær-i ke bæcce dær bæqæl daræd
'mother who has a child in her arms'

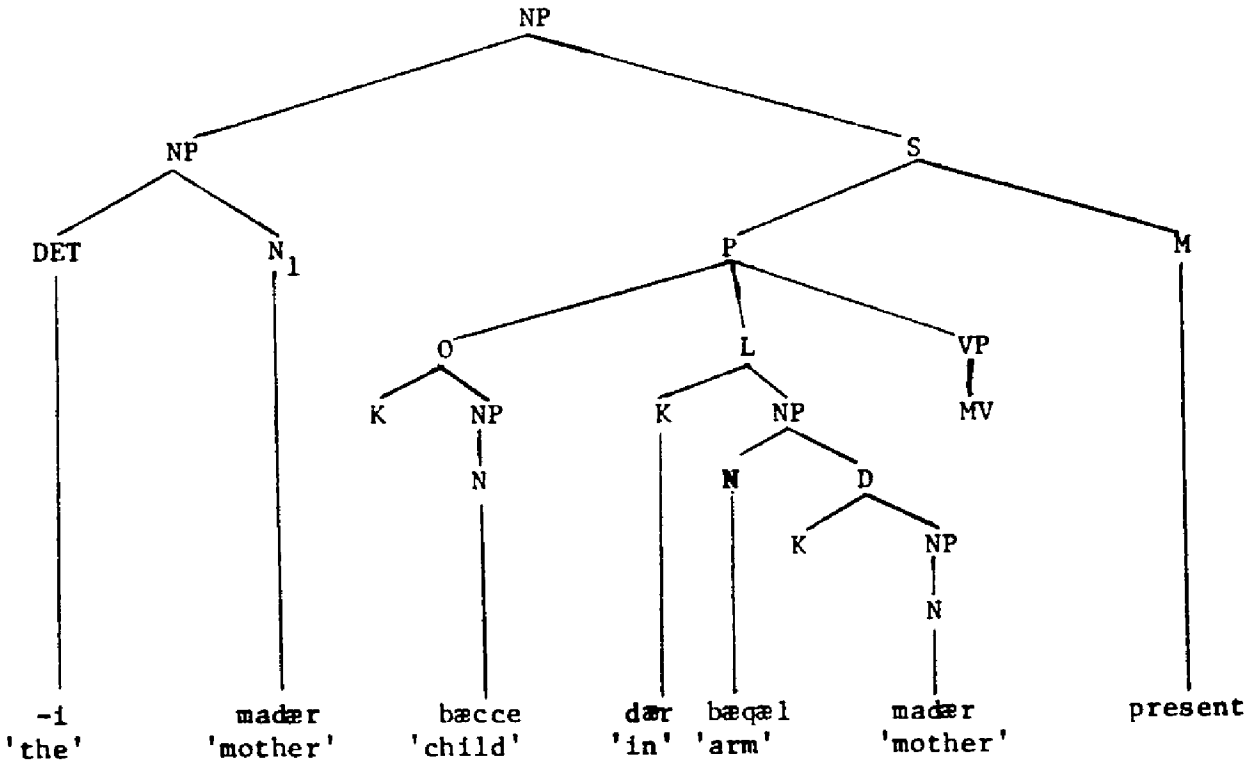
The E-construction (304) must contain a prepositional phrase, such as /dær bæqæl/, because without one, the interpretation of the head noun /madær/ as the possessor of the modifying noun /bæcce/ is

not possible. E-construction (306), which does not contain a prepositional phrase, does not mean 'the mother has a child'.

(306) madær-E-bæcce 'the mother of the child'

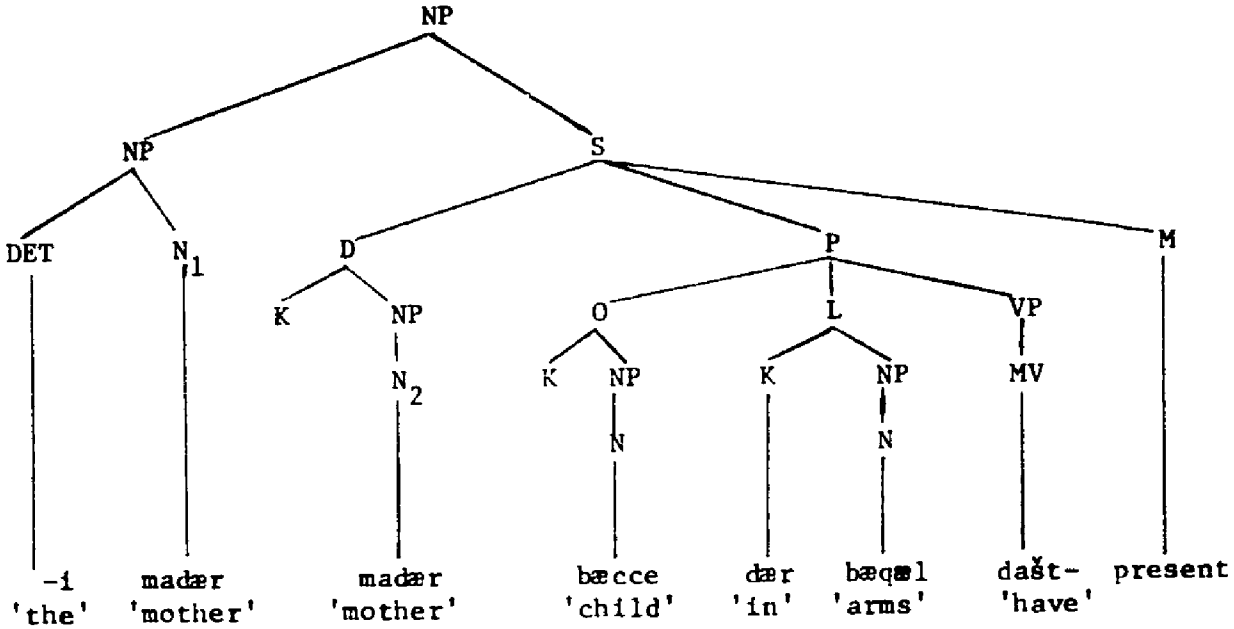
I suggest the following deep structure for (304) and (305).

(307)



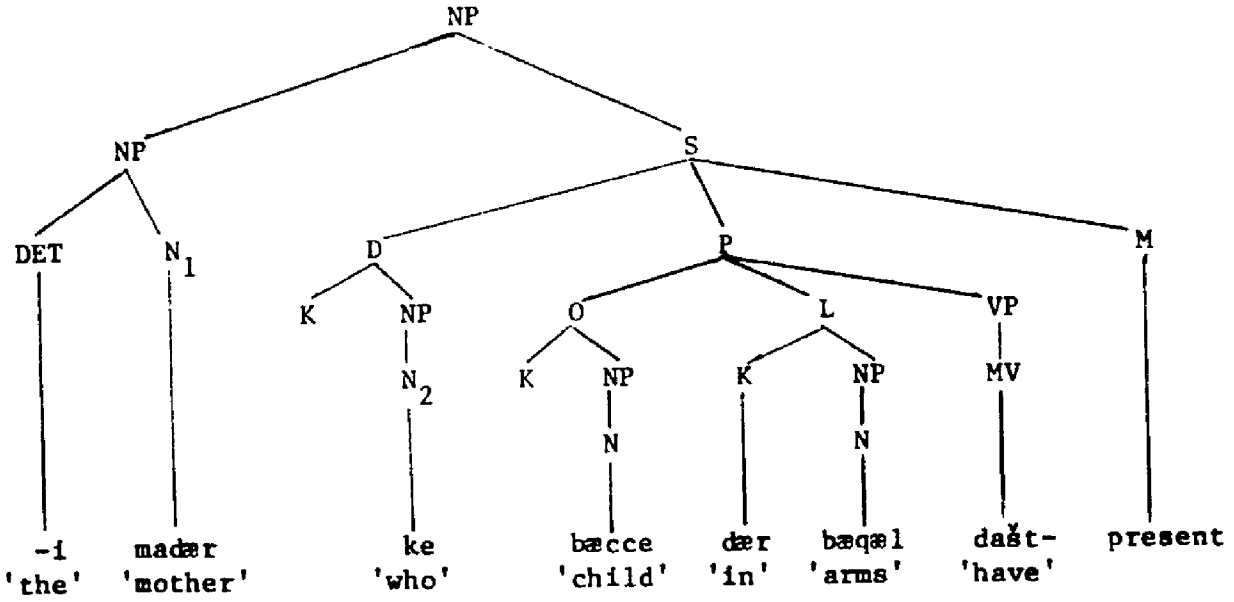
A transformation which will be discussed in detail later[6] removes the D NP from under the L NP and attaches it to P. Then the D NP is raised to the subject position in S by T-1, and /dašt-/ is introduced in the MV. The resulting structure is the following:

(308)



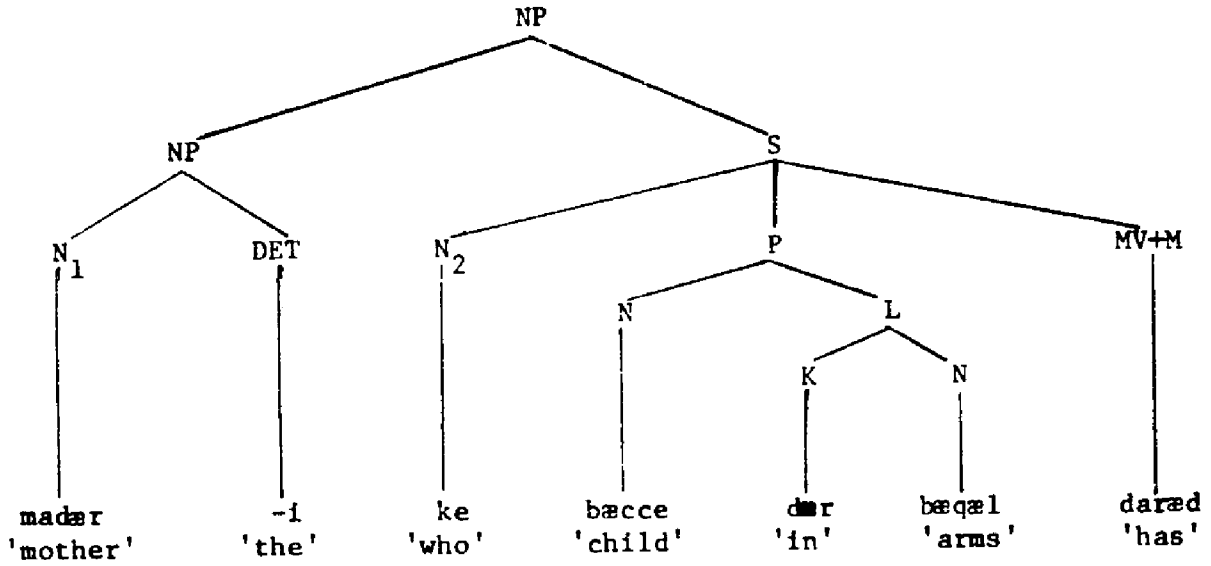
T-3 changes the identical noun in S into the relative pronoun /ke/. The resulting structure is the following:

(309)



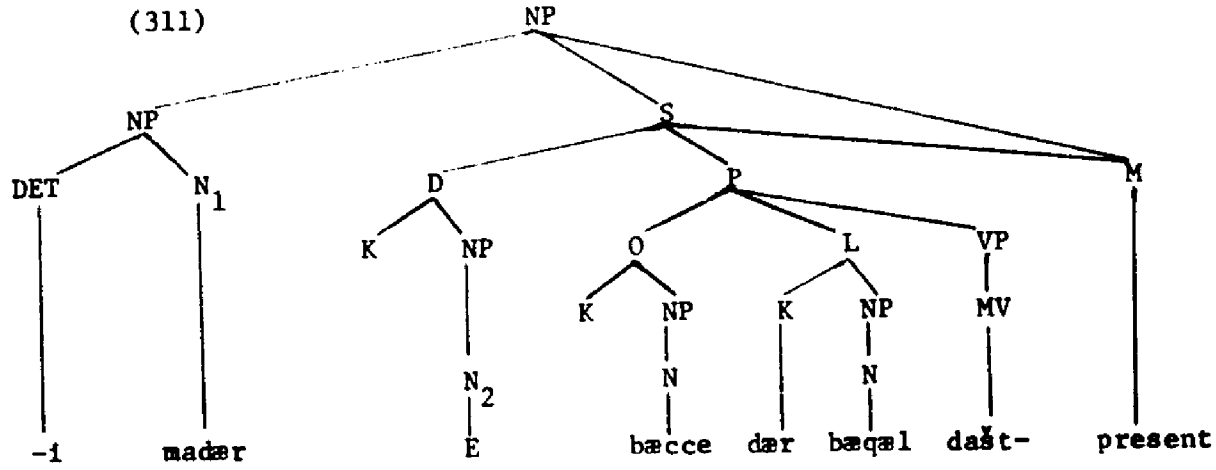
If the nominalization process is stopped at this point, then the T-16 and T-17 will convert (309) directly into a relative clause (see 305). The surface structure of this relative clause is given below.

(310)



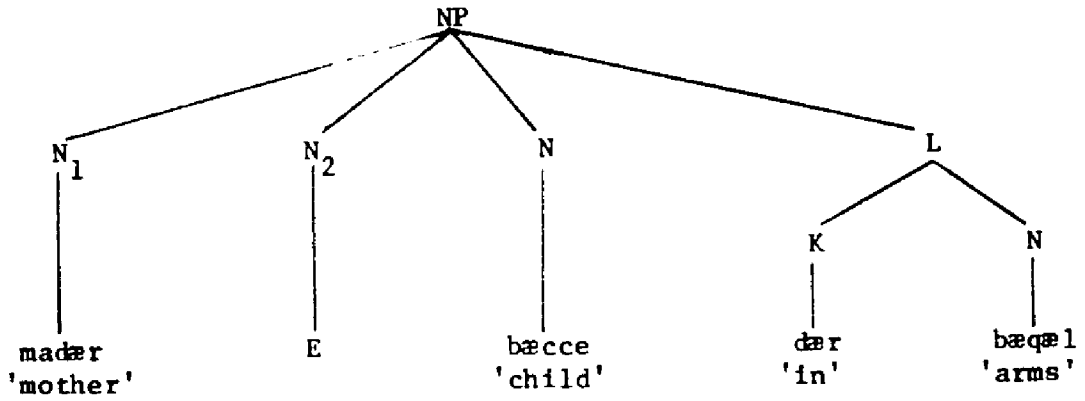
If (309) is nominalized further, then the result is an E-construction (see 304). T-5 transforms the relative pronoun /ke/ into the ezafe marker when the /ke/ has been derived from the surface subject of the embedded sentence and when the MV is either /bud-/ or /dašt-/. The resulting structure is the following:

(311)



T-15 states that the M and MV constituents may be deleted if the MV is /dašt-/. After applying T-15, T-16, and T-17 to (311) the resulting surface structure is the following:

(312)



A relative clause can also be reduced to an E-construction when the MV is a form of the copula. The following are examples of this type of construction. The words in parentheses are optional.

(313) ketab-E-æz (ru-E-) miz oftadé 'book fallen from a table'

(314) danešjuyan-E- æz orupa bærgašté 'students returned from Europe'

(315) ælæfha-E-(æz) aftab suxté 'alfalfa burned by the sun'

(316) ketab-E-geran 'expensive book'

(313-316) can be paraphrased by putting the modifiers in relative clauses where the main verbs are forms of /bud-/ or /šod-/.

(317) ketab-i ke æz ru-E miz oftadé-æst
'the book that has fallen off the table'

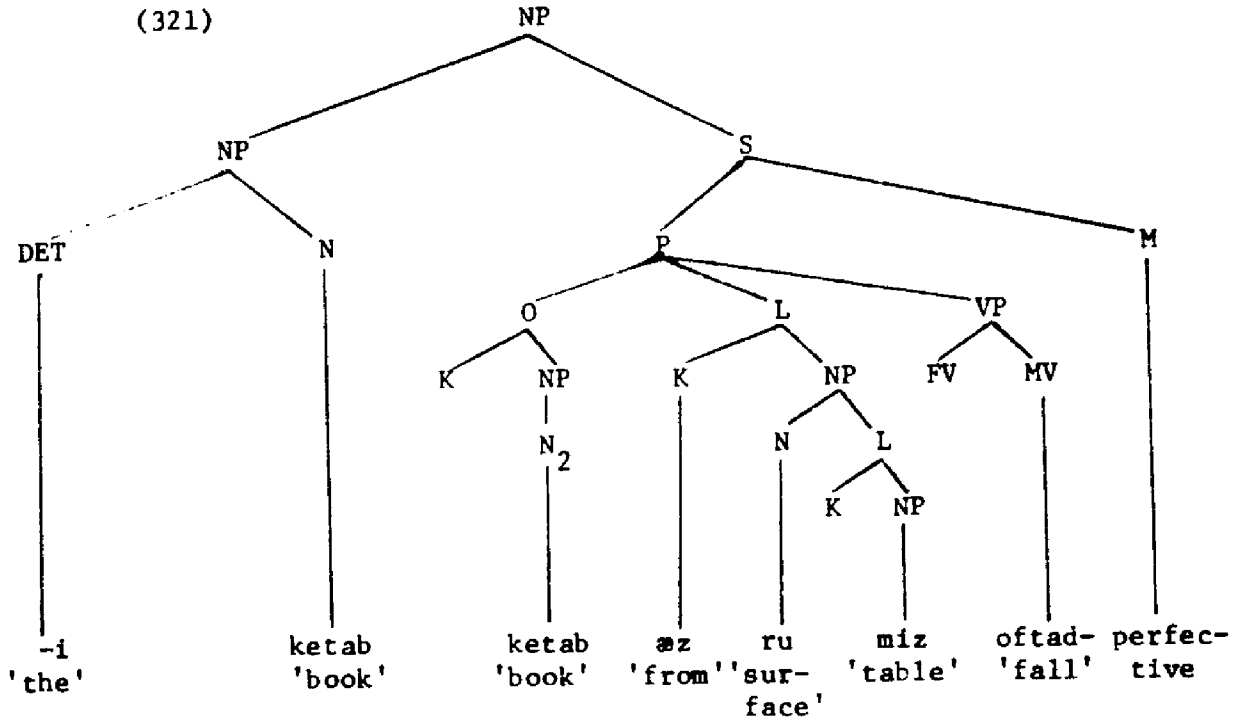
(318) danešjuyan-i ke æz orupa bær-gašte-ænd
'students who have returned from Europe'

(319) ælæfha-i kæ æz aftab suxté-šod 'alfalfa which was burned by the sun'

(320) ketab-i ke geran æst 'the book which is expensive'

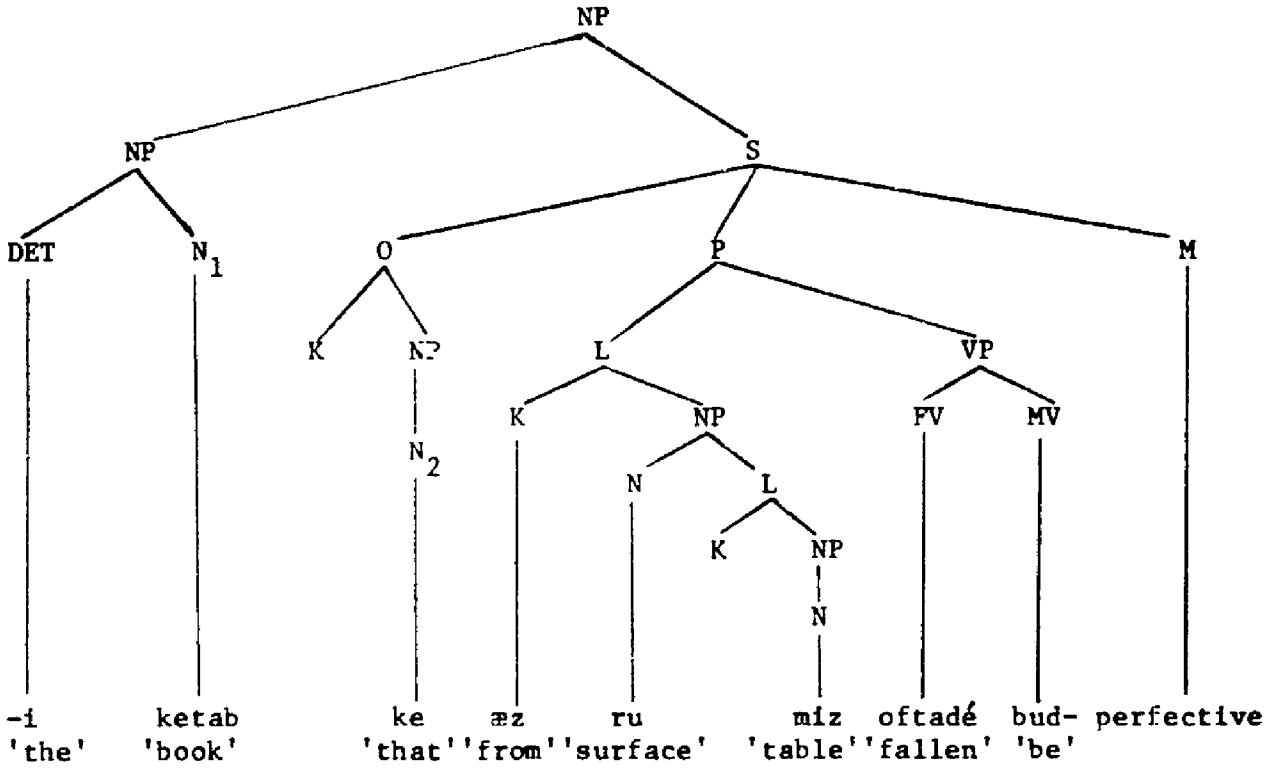
The related constructions (313) and (317) are derived from a single deep structure:

(321)



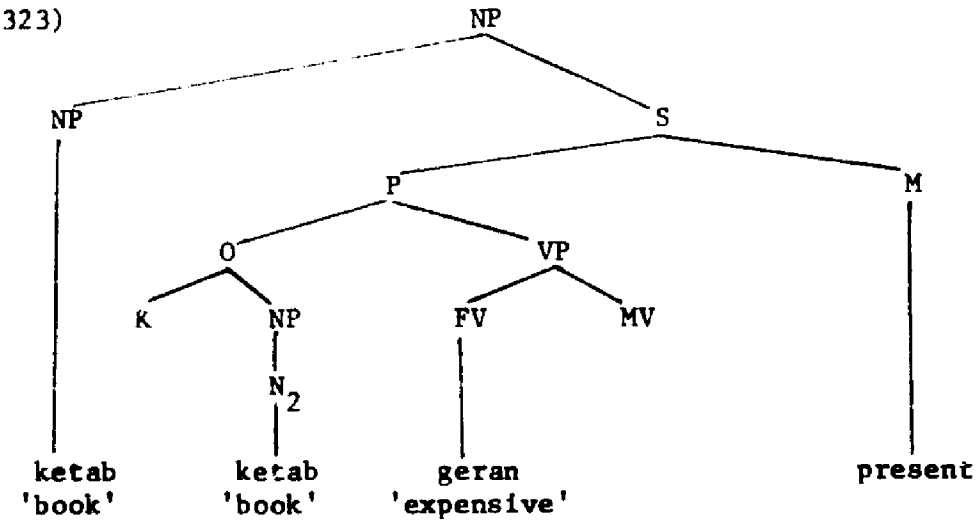
When M is passive or perfective, as in (321), the MV is changed to its participial form and moved to the FV position. A form of the copula is introduced into the vacated MV. (322) shows these changes and also those required by T-1 and T-3.

(322)

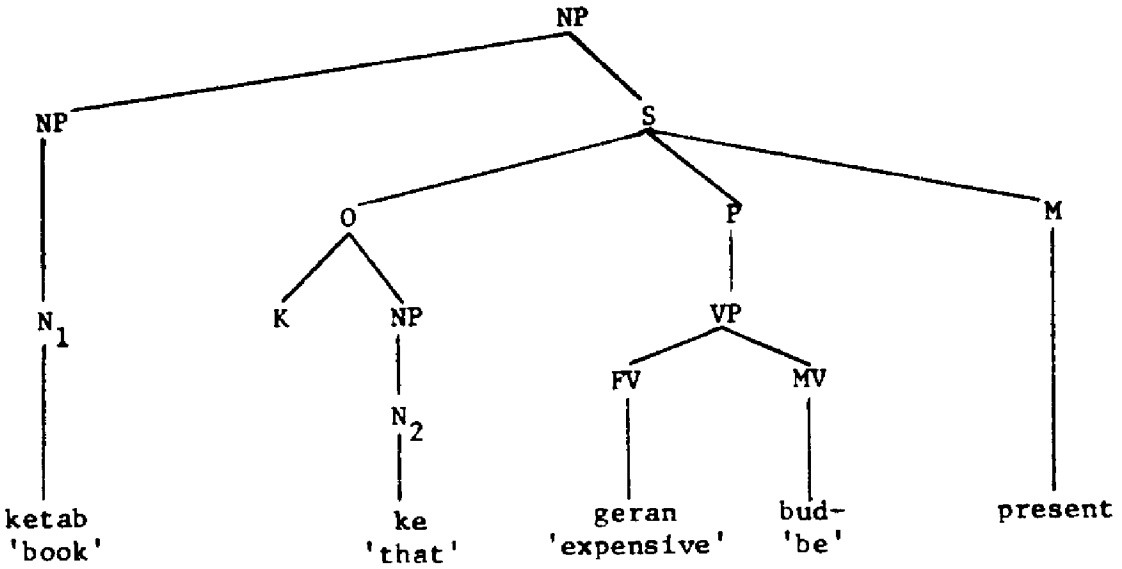


The following two diagrams show how at a certain point in its derivation, the structure of (320) is basically parallel to that of (317) which is illustrated in (322) above. (323) below gives the deep structure of (320). (324) shows the result of applying T-1 and T-3.

(323)

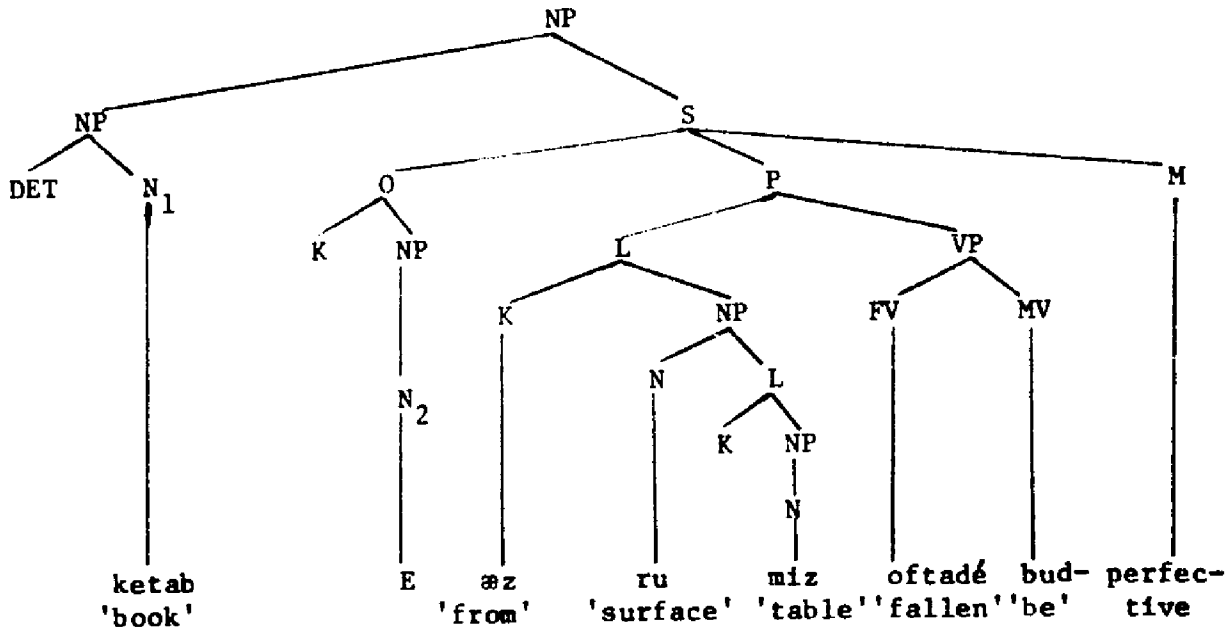


(324)

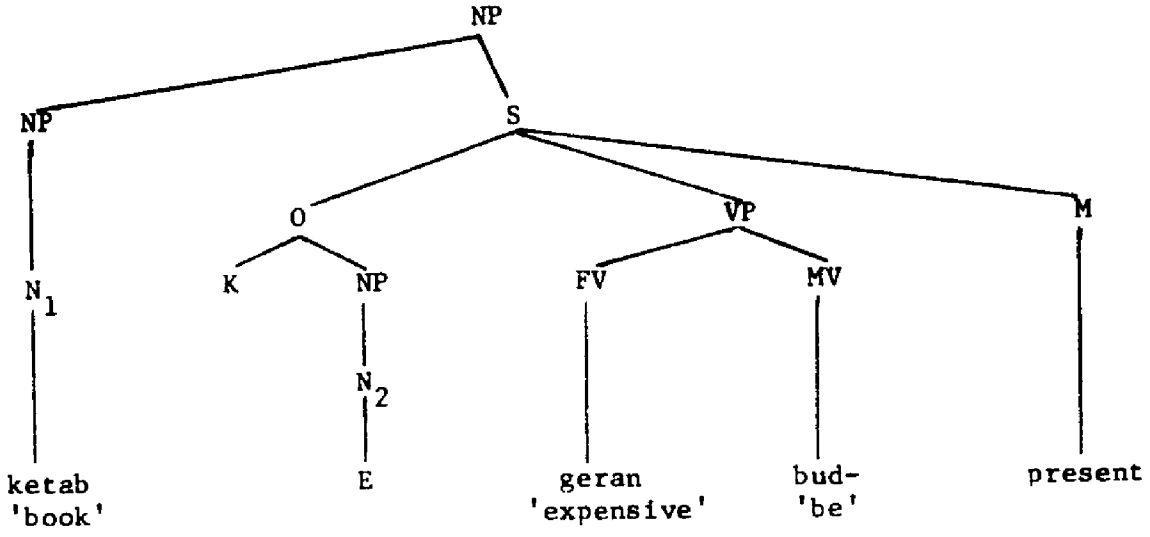


The only significant difference between (324) and (322) is the presence of a L NP under P in (322). T-5 will apply to both structures giving the following tree diagrams.

(325)

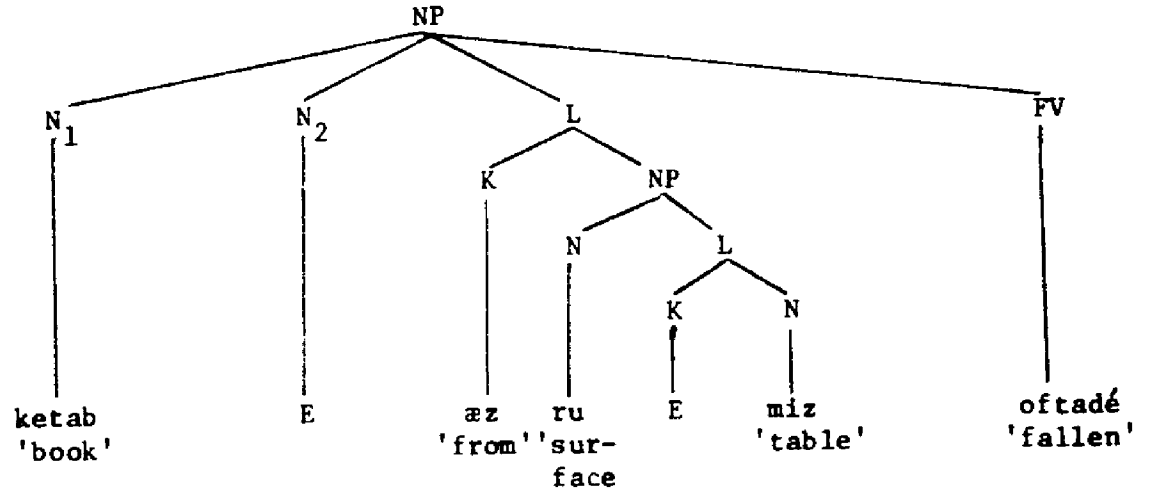


(326)

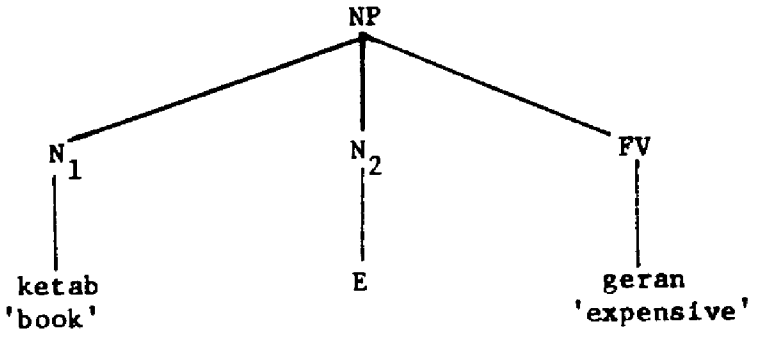


T-15 and T-16 apply to both (325) and (326) giving the following two surface structures.[7]

(327)



(328)



4.5 Extended Adjectival E-Constructions. Extended adjectival E-constructions consist of a head noun modified by a string of adjectives connected by ezafe morphemes. An example of such a construction is the following:

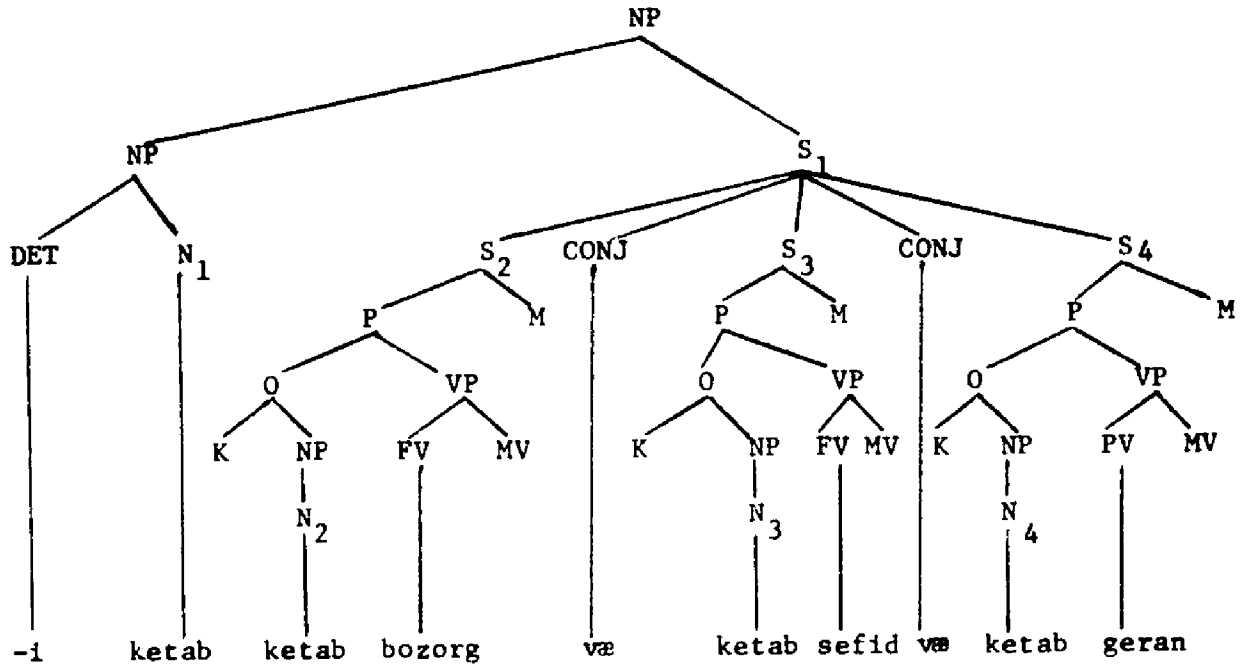
(329) ketab-E-bozorg-E-sefid-E-geran 'big, white, expensive book'

(329) can be paraphrased as follows:

(330) ketab-i ke bozorg æst, væ sefid æst, væ geran æst
'the book that is big, and is white, and is expensive'

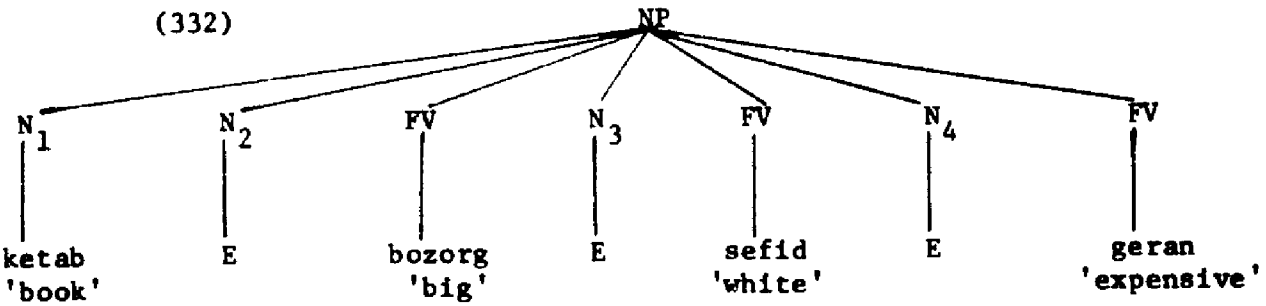
(329) and (330) have a common deep structure. N_1, N_2, N_3 and N_4 are identical.

(331)



The same transformations apply to (331) as applied to the deep structure (323) which was the base for the single adjective E-construction. The only difference is that in (185) the transformations apply to three embedded sentences (S_2, S_3, and S_4), instead of to a single embedded sentence. The following transformational rules are required: T-1 (subject raising), T-3 (/ke/ introduction), T-5 (E introduction), T-15 (M and MV deletion), and T-16 (structure reduction). Applying them to (331) gives the following surface structure:

(332)



FOOTNOTES

CHAPTER FOUR

[1]These rules are given in Chapter Three.

[2]This rule is discussed in Chapter Three, p. 51.

[3]See (298) for a structure containing a pronominalized noun in P.

[4]I am arbitrarily assigning /-ra/ to the DET constituent.

[5]A structure to which T-2 does apply is given on p. 75.

[6]Cf. Chapter Six, pp. 154-155.

[7]Cf. Chapter Six, p. 140 for the transformation which introduces the ezafe into the K preceding the word /miz/.

CHAPTER FIVE

INFINITIVAL EZAFE CONSTRUCTIONS

This chapter deals with E-constructions having an infinitive as the head noun. The first part of the chapter is a discussion of the data to be analyzed, and the second part is a discussion of the rules used in the analysis.

5.1 The Data.

5.1.1 The head of an infinitival E-construction can be derived from a verb in either the active or passive voice.

(333) koštæn-E-šir 'killing the lion'

(334) košté-šodæn-E-šir-ra 'the lion's being killed'

(335) košté-šodæn-E-dær jæng 'being killed in war'

(336) koštæn-E-dær jæng 'killing in war'

Since the active-passive distinction is determined by subject raising, the rules which account for infinitival E-constructions must apply to a surface structure in which subject raising has taken place.

5.1.2 The MV constituent of the VP cannot become the head of an infinitival E-construction if there is also a fore-verb in the VP.[1] The following examples illustrate the incorrect constructions which are the result if this condition is violated.

(337) a. in ketab geran-æst 'This book is expensive.'
FV MV

b. *budæn-E-geran-E-in ketab
MV FV

(338) a. kesi be tehran vared-šod 'Someone arrived at Tehran.'
FV MV

b. *šodæn-E-vared be tehran
MV FV

(339) a. kesi zæmin-xord 'Someone fell down.'
FV MV

b. *xordæn-E-zæmin
MV FV

(340) a. kesi guš-midæhæd 'Someone listens.'
FV MV

b. *dadæn-E-guš
MV FV

(341) a. kesi negah-mikonæd 'Someone is looking.'
FV MV

b. *kærædæn-E-negah
MV FV

(342) a. kesi bær-gæšt 'Someone returned.'
FV MV

b. *gæštæn-E-bær
MV FV

(343) a. šir-ra košté-šod 'The lion was killed.'
FV MV

b. *šodæn-E-košté
MV FV

(344) a. rah bæsté-šod 'The road was closed.'
FV MV

b. *šodæn-E-bæsté
MV FV

The entire VP (FV + MV) can become the head of an infinitival E-construction as the following examples illustrate.

(345) a. mašin xub-æst 'The car is good.'
FV MV

b. xub-budæn-E-mašin 'the car's being good'
FV MV

(346) a. šir-ra košté-šod 'The lion was killed.'
FV MV
b. košté-šodæn-E-šir-ra 'the lion's being killed'

(347) a. u be tehran vared-šod 'He arrived at Tehran.'
FV MV
b. vared-šodæn-E-be tehran 'arriving at Tehran'

(348) a. hæsæn pa'in-amæd 'Hassan came down.'
FV MV
b. pa'in-amædæn-E-hæsæn 'Hassan's coming down'

(349) a. mašin jelow-ræft 'The car went forward.'
FV MV
b. jelow-ræftæn-E-mašin 'the car's going forward'

Examples (345-349) show the need for a rule which fronts the entire VP and converts the MV to its infinitive form. This rule can also be used to determine if a preposition is functioning as a fore-verb or as a CASE marker (K). When functioning as a FV it can be fronted with the MV in an infinitival E-Construction as illustrated in examples (348-349) above. In example (350) below, the preposition cannot be fronted with the MV since it is not functioning as a fore-verb.

(350) *piš amædæn-E-hæsæn

5.1.3 A transitive VP in the active voice cannot be directly followed by its surface subject in an infinitival E-construction.

(351) koštæn-E-šir 'killing the lion'
(/šir/ can only be the direct object)

(352) xordæn-E-hæsæn 'eating Hassan'
(/hæsæn/ cannot be the subject of /xordæn/)

When the VP is not transitive it can be directly followed by its subject.

(353) ræftæn-E-hæsæn 'Hassan's going'

(354) xandæn-E-bolbol 'the nightingale's singing'

(355) jelow-ræftæn-E-hæsæn 'Hassan's going forward'

(356) pa'in amædæn-E-hæsæn 'Hassan's coming down'

A transitive verb in the active voice can be directly followed by its direct object and then by its subject if the CASE of the subject is marked by a preposition such as /tævæssote/ 'by' in the examples below.

(357) a. koštæn-E-šir tævæssote hæsæn 'the killing of the lion by Hassan'

b. *koštæn-E-šir hæsæn

(358) xandæn-E-ketab tævæssote hæsæn 'the reading of the book by Hassan'

(359) baz-kærdæn-E-dær tævæssote hæsæn 'the opening of the door by Hassan'

(360) xæridæn-E-ketab tævæssote hæsæn 'the buying of the book by Hassan'

(361) xordæn-E-ab tævæssote hæsæn 'the drinking of the water by Hassan'

The object noun cannot be deleted in the examples above.

(362) *koštæn-E-tævæssote hæsæn

(363) *xandæn-E-tævæssote hæsæn

(364) *baz-kærdæn-E-tævæssote hæsæn

(365) *xæridæn-E-tævæssote hæsæn

(366) *xordæn-E-tævæssote hæsæn

5.1.5 A transitive verb can be made intransitive by moving the direct object into the VP, and in the process changing its constituent label to FV (fore-verb). After this change, the newly created intransitive VP is no longer subject to the restrictions on transitive VPs stated in 5.1.3 above.

As I show below, /xord-/ 'drink' is used transitively in (367), and therefore cannot be directly followed by its subject as is shown in (368).

(367) hæsæn abjo-ra xord 'Hassan drank the beer.'

(368) *xordæn-E-hæsæn

If /abjo-xord-/ 'beer' is made into a verb, the VP becomes /abjo/xord-/ having the meaning 'beer drinking'. This VP is now intransitive, and when it is fronted and changed into an infinitive it can be directly followed by its subject.

(369) abjo-xordæn-E-hæsæn 'Hassan's beer drinking'

Additional examples of intransitive VPs with FVs created from direct objects are the following:

(370) ketab-xandæn-E-hæsæn 'Hassan's book reading'

(371) pul-daštæn-E-hæsæn 'Hassan's having money'

(372) radio guš-dadæn-E-hæsæn 'Hassan's listening to the radio'

(372) shows that a VP can have more than one fore-verb. The fore-verb /guš/ is an original fore-verb. It is entered in the lexicon

as a fore-verb used with the main verb /dad-/. /radio/ is a created fore-verb, moved into the VP constituent from the direct object position.

5.1.6 Noun phrases which are nominalizations cannot be converted into fore-verbs. If this is attempted, incorrect constructions, such as the following, will be produced.

(373) *radio-E-mæn guš-dadæn-E-hæsæn
*'Hassan's my radio listening'

(374) *ketab-E-xub xandæn-E-hæsæn
*'Hassan's good book reading'

(375) *pul-E-amrika'i daštæn-E-šæxs
*'a person's American money having'

Examples (372-374) suggest that only nouns can function as created fore-verbs. If the object noun is not incorporated into the VP, it is not subject to the restrictions on modification as the following examples show.

(376) xordæn-E-abjo-E-xub 'drinking good beer'

(377) xordæn-E-abjo-E-mæn 'drinking my beer'

(378) xordæn-E-do-ta livan-E-abjo 'drinking two bottles of beer'

(379) xordæn-E-in abjo 'drinking this beer'

(380) bavær-kærdæn-E-cizi ke rast nist 'believing something that isn't right'

5.1.7 Ezafe constructions having the form "infinitive-E-preposition-NP" can be paraphrased, when the infinitive is intransitive, as "infinitive-E-subject NP,preposition NP."

(381) a. ræftæn-E-be tehran 'going to Tehran'

b. ræftæn-E-šæxs be tehran 'a person's going to Tehran'

(382) a. ræqsidæn-E-dær xiaban 'dancing in the street'

b. ræqsidæn-E-šæxs dær xiaban 'a person's dancing in the street'

When the infinitive is transitive, prohibiting the subject NP from directly following the infinitive, the structure can be paraphrased as "infinitive-E-object NP, preposition NP."

(383) a. koštæn-E-ba tofæng 'killing with a gun'

b. koštæn-E-šæxs ba tofæng 'killing someone with a gun'

5.1.8 The A (agentive) preposition /tævæssote/ 'by' is in complementary distribution with the ezafe when the agentive NP is the subject of an infinitive.

(384) a. ketab xæridæn-E-hæsæn 'Hassan's book reading'

b. ketab xæridæn-E tævæssote hæsæn 'book reading by Hassan'

c. *ketab-xæridæn-E-tævæssote hæsæn

*'book reading of by Hassan'

These examples suggest that the ezafe in infinitival E-constructions is derived from the same constituent marker as are prepositions, namely K. There are no problems with postulating a common source for the ezafe and surface case markers as long as one does not consider /-ra/ to be a surface case marker. If /-ra/ were derived from K, the following problem would arise with passive infinitival E-constructions.

The surface subject of a passive infinitive can be marked with /-ra/ as is illustrated in (385). If this /-ra/ were interpreted as the CASE marker of /šir/ 'lion', then K could not also be used as the source of the ezafe without postulating two Ks.

(385) košté-šodæn-E-šir-ra 'the lion's being killed'

The morpheme /-ra/ can also be incorporated into the VP with the object noun when the latter becomes a created fore-verb.

(386) dær-ra baz-kærdæn 'opening the door'

Because of the /-ra/ in (386), the constituent structure of the created fore-verb is unclear. If /-ra/ marks the CASE of a NP, then /dær-ra/ in (386) must be dominated by a CASE label rather than by the constituent label N. This is counter evidence to the argument presented above that only nouns can be moved into the VP as created fore-verbs.[2] This indicates that much remains to be studied about the syntax of /-ra/.

5.1.9 The remaining data in this chapter concerns constructions in which the FV constituent is separated from the MV constituent. It is not at all clear what determines the fronting of fore-verbs. The following two examples illustrate the problem.

(387) hæsæn negah-E-tun nemud 'Hassan looked at you.'

(388) *hæsæn guš-E-tun dad

The meanings of the verb phrases in (387) and (388) are very close. /negah-nemud-/ means 'to look at', and guš-dad-/ means 'to listen to'. Only the fore-verb /negah-/ may be fronted. One explanation

might be that if /guš-/ is fronted, a semantic ambiguity results. /guš-E-tun/ means 'your ear'. This would cause (388) to have the meaning 'Hassan gave your ear.' which is not a paraphrase of the sentence /hæsæn be šoma guš-dad/ 'Hassan listened to you.'

It appeared at one point in this study that a fore-verb could be fronted only when there was an intervening pronoun as in (387), but there are apparently some exceptions to this rule.

(389) hæsæn vared-E-tehran šod 'Hassan arrived in Tehran.'

(390) mæn ejaze-E-mandæn dær tehran nemidæhæm
'I don't give permission to stay in Tehran.'

(391) u e'lan-E-jæng dad 'He declared war.'

Two restrictions on fore-verb fronting seem inviolable: Neither adjective fore-verbs nor created fore-verbs can be fronted. There is only one NP in a proposition whose fore-verb is an adjective. Subject raising removes the NP from the proposition. This explains why fore-verb fronting is impossible with adjective fore-verbs. Created fore-verbs such as /abjo/ 'beer' in /abjo-xord-/ 'to drink beer' are direct objects in surface structure. Since fore-verb fronting generally takes place around the direct object, the fact that the created fore-verb is the direct object would rule out fore-verb fronting.

5.2 The following are the transformational rules which are relevant to the description of the constructions cited in Part 1 of this chapter.

(391) T-1 Subject raising

T-6 FV fronting

T-7 FV creation

T-8 VP fronting and M deletion

T-9 When there is a direct object:

a. The direct object K $\Longrightarrow$ E

b. Subject CASE deletion or movement to the position following the direct object NP.

T-10 When there is no direct object:

a. (Optional) subject K $\Longrightarrow$ E

b. (Optional) subject NP deletion with K remaining

c. (Optional) E deletion

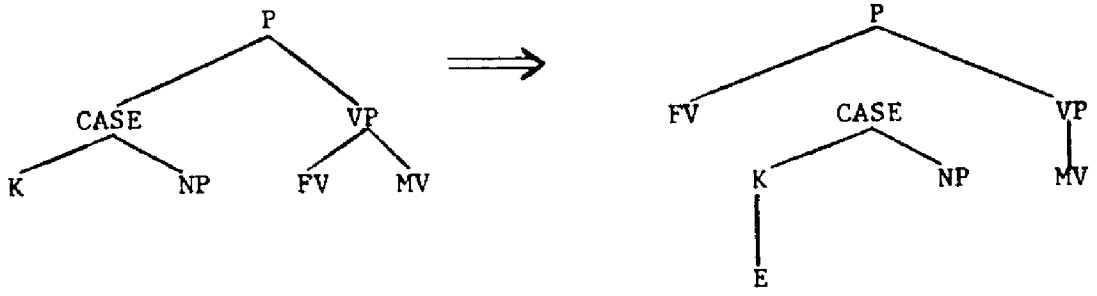
T-16 Structure reduction

T-17 Final rules

5.2.1 The constructions in 5.1.1 show the necessity of subject raising in infinitival E-constructions. The subject raising rule is illustrated in Chapter Three.

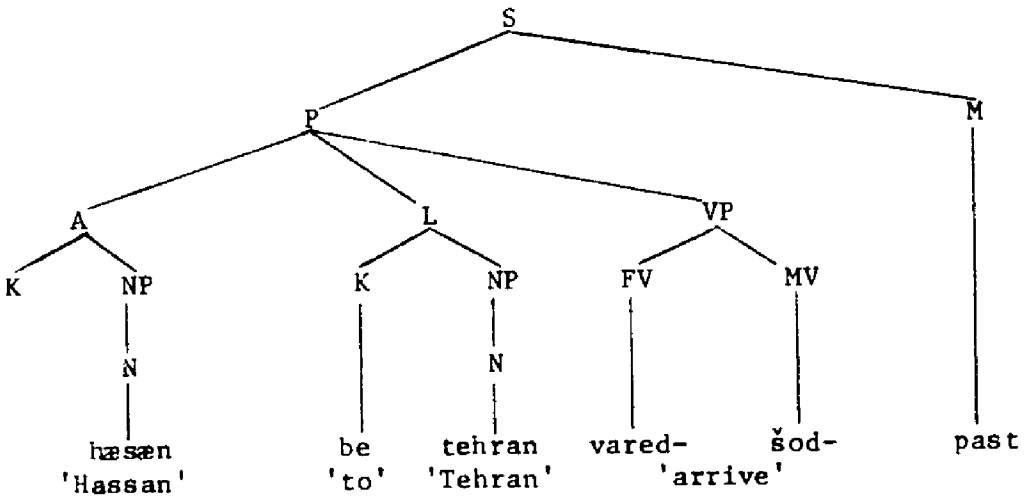
5.2.2 In some verb phrases the fore-verb can be fronted.[3] The FV fronting transformation (T-6) is stated as follows:

(392)

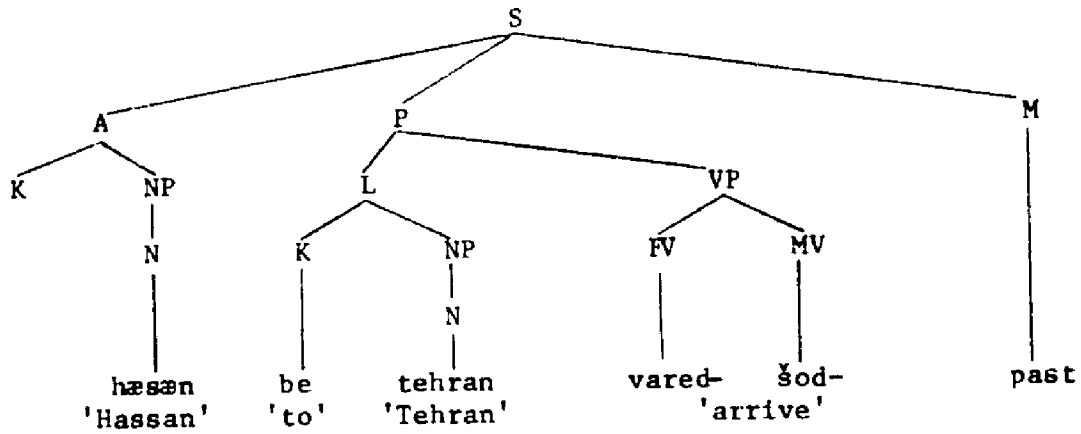


The derivation of (338), which requires FV fronting, is shown in three steps. Step (393) gives the deep structure. (394) shows subject raising. (395) shows T-6 (FV fronting), T-16 (structure reduction), and T-17 (final rules).

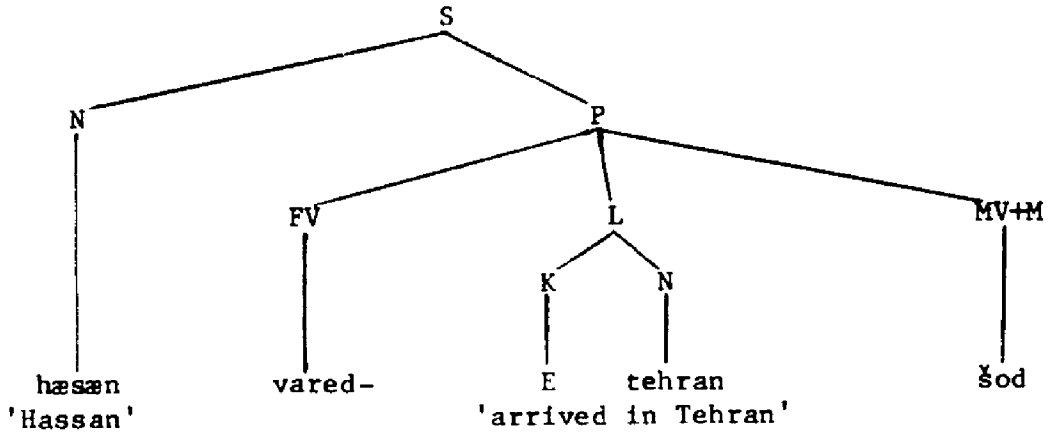
(393)



(394)



(395)



Additional evidence supporting the decision to call the ezafe a CASE marker and to attach it to K is in the following examples.

(396) a. hæsæn vared-E-tehran šod 'Hassan arrived in Tehran.'

b. *hæsæn vared be tehran šod

c. hæsæn be tehran vared-šod 'Hassan arrived in Tehran.'

d. *hæsæn-E-tehran vared-šod

The examples in (396) show that the ezafe is in complementary distribution with the preposition /be/ 'to'. When the fore-verb is fronted the ezafe is used and the preposition cannot be used. When the fore-verb is not fronted, the preposition is used nd the ezafe cannot be used.

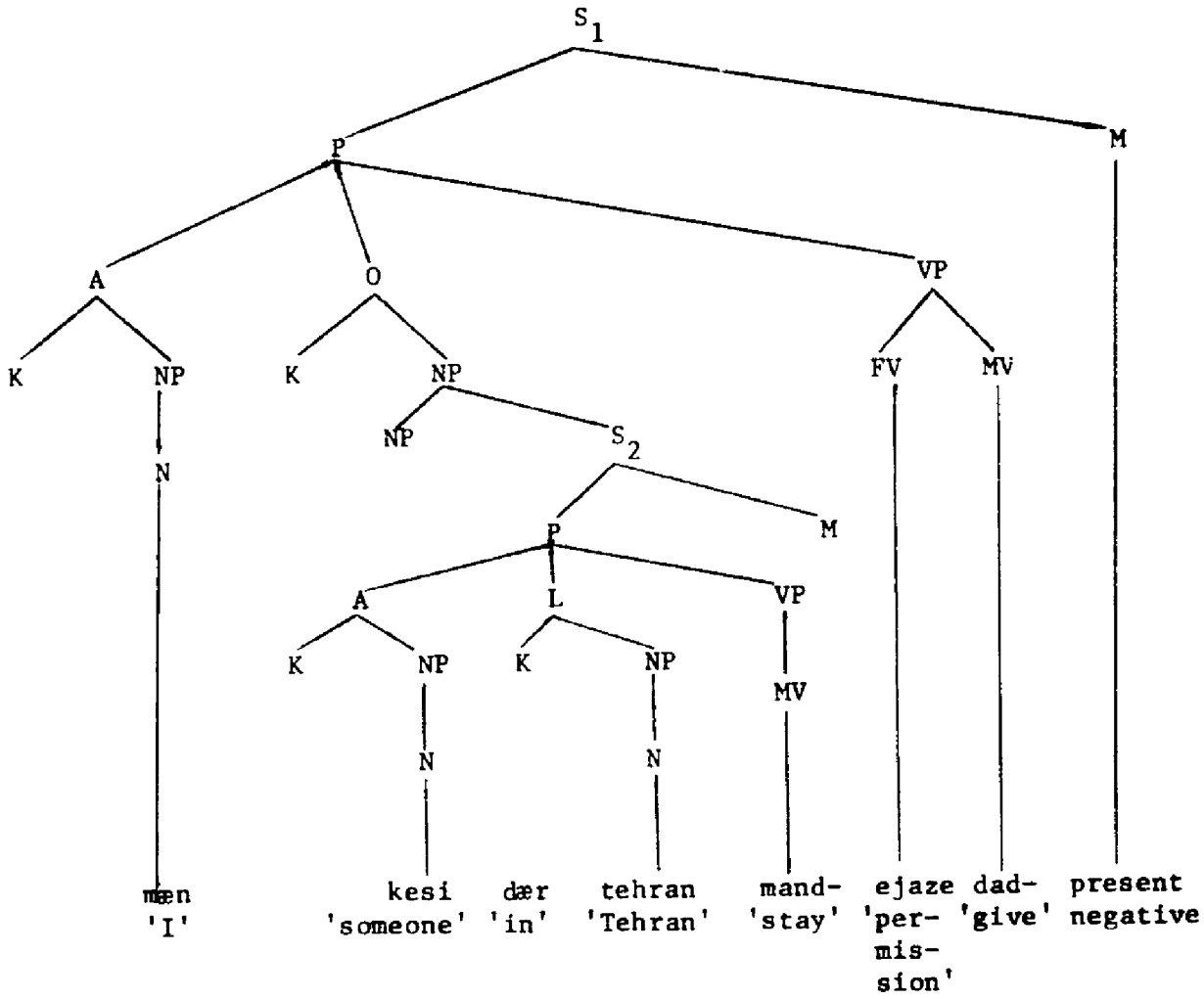
Example (397) shows that a fore-verb can be fronted around a NP consisting itself of a nominalization (mandæn dær Tehran 'staying in tehran').

(397) mæn ejaze-E-mandæn dær tehran nemidæhæm

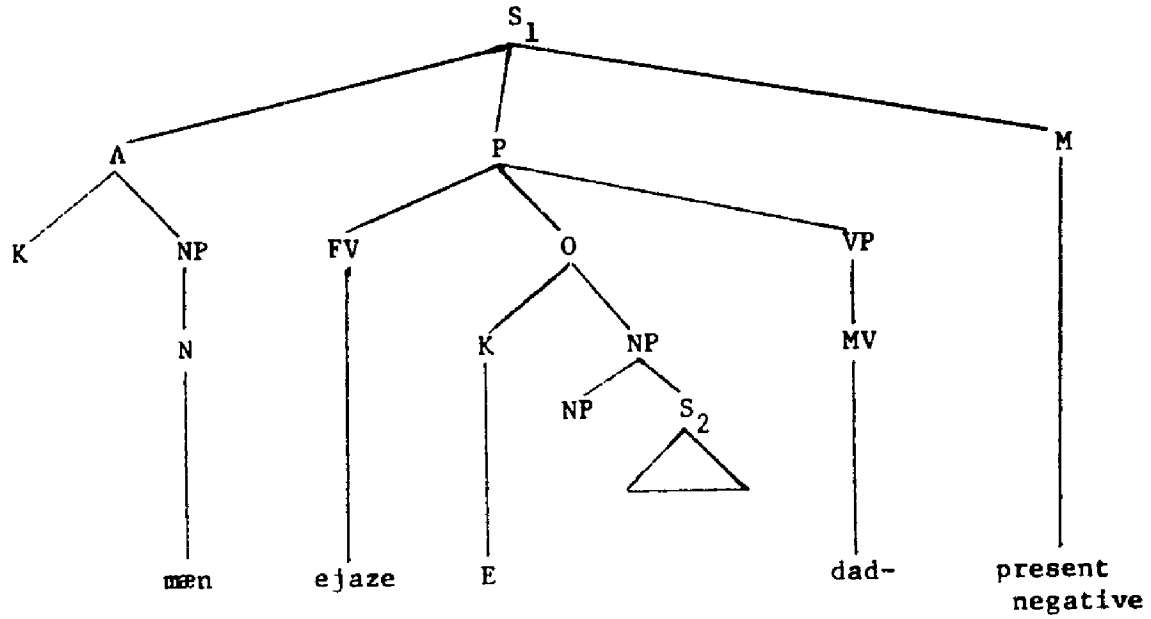
'I don't give permission to stay in Tehran.'

The first stage in the derivation of (397) shows the deep structure. The second stage shows the application of T-1 (subject raising) and T-6 (fore-verb fronting). The structure of S_2 is omitted from (399).

(398)

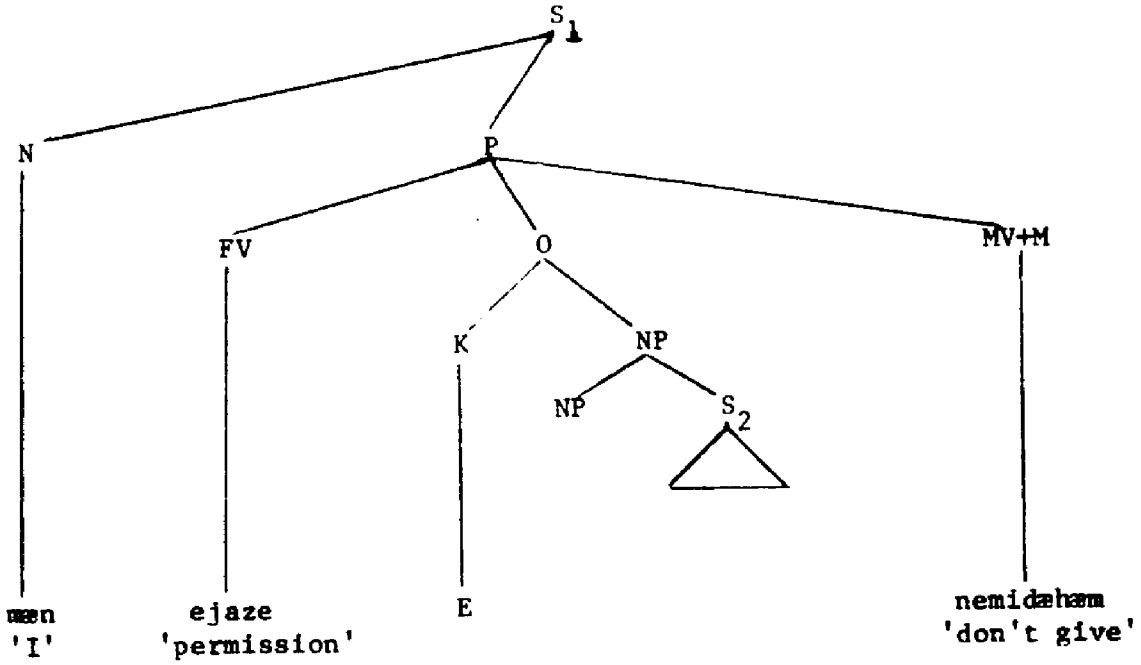


(399)



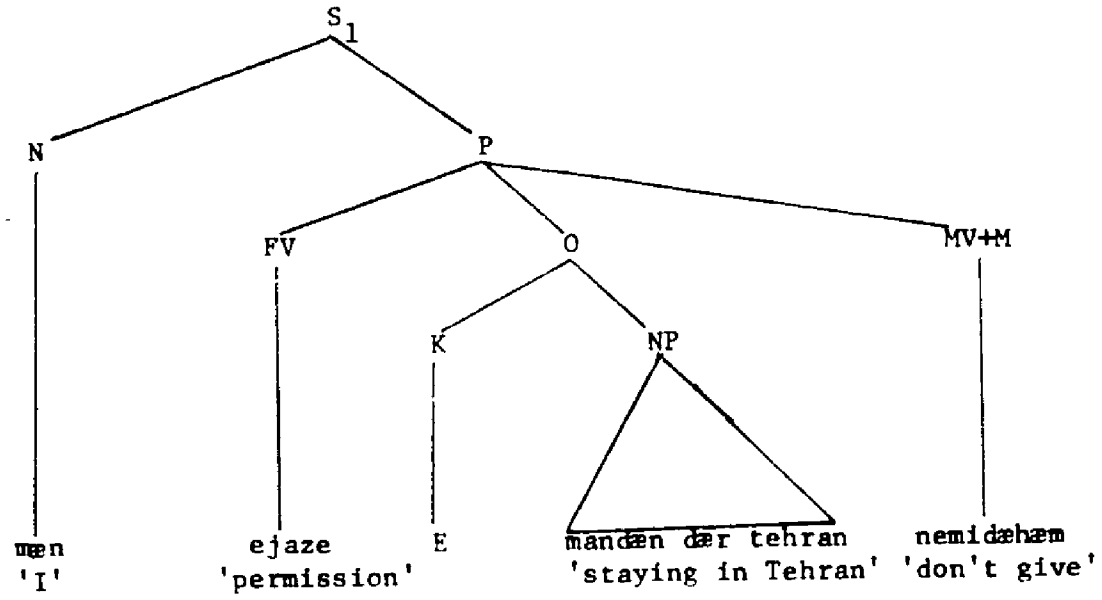
S_1 is converted into its surface structure by T-16 (structure reduction) and T-17 (final rules). The structure of S_2 is omitted from the following diagram.

(400)



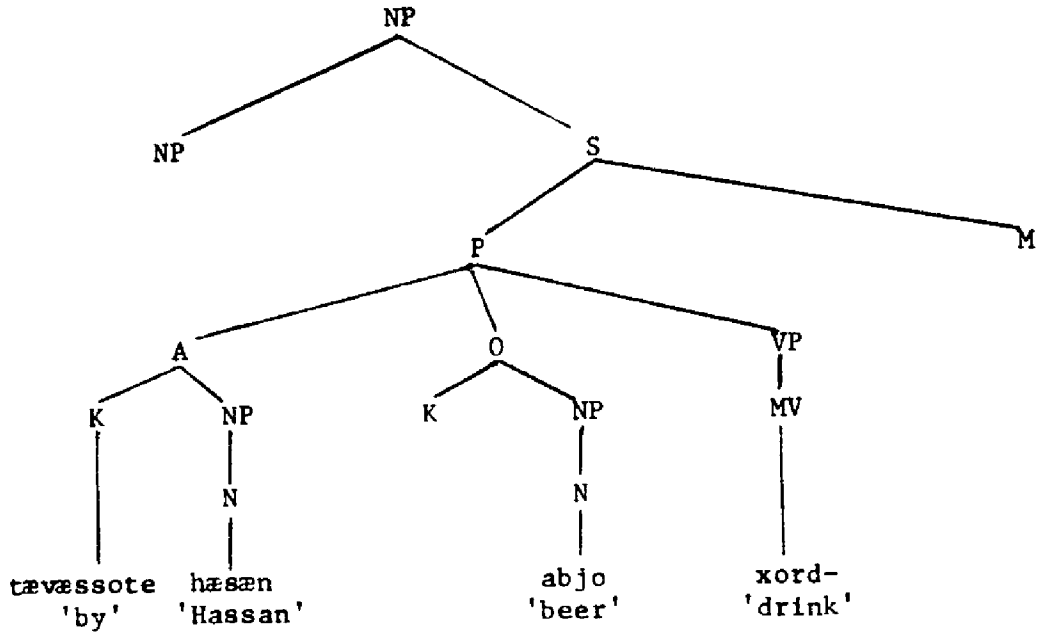
Rules T-8 and T-10 convert the embedded sentence S_2 into an infinitival NP as illustrated in detail below.[4] After these rules have been applied the final surface structure is the following:

(401)



5.2.3 The examples, in 5.1.5 above, illustrated the need for a rule which converts direct objects into fore-verbs. T-7 provides for this by moving the object noun under the VP constituent with a created label FV. The following example illustrates the derivation of the NP /abjo-xordæn-E-hæsæn/ 'Hassan's beer drinking' in which /abjo/ 'beer' is a created fore-verb. The deep structure is given in (402), T-1 (subject raising) applies in (403), and T-7 (fore verb creation) applies in (404).

(402)


NP
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A
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K
NP
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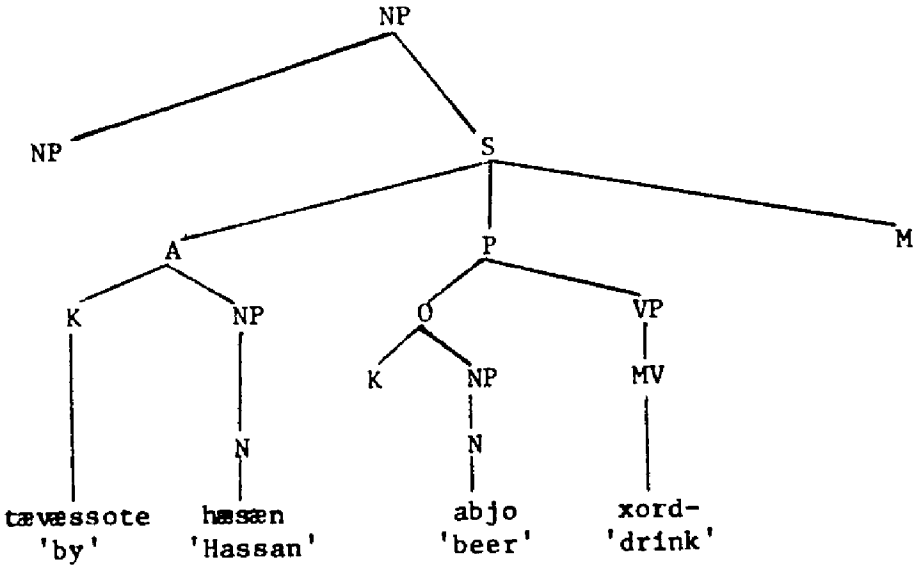
tævæssote
'by'
hæsæn
'Hassan'
abjo
'beer'
xord-
'drink'

(403)


NP
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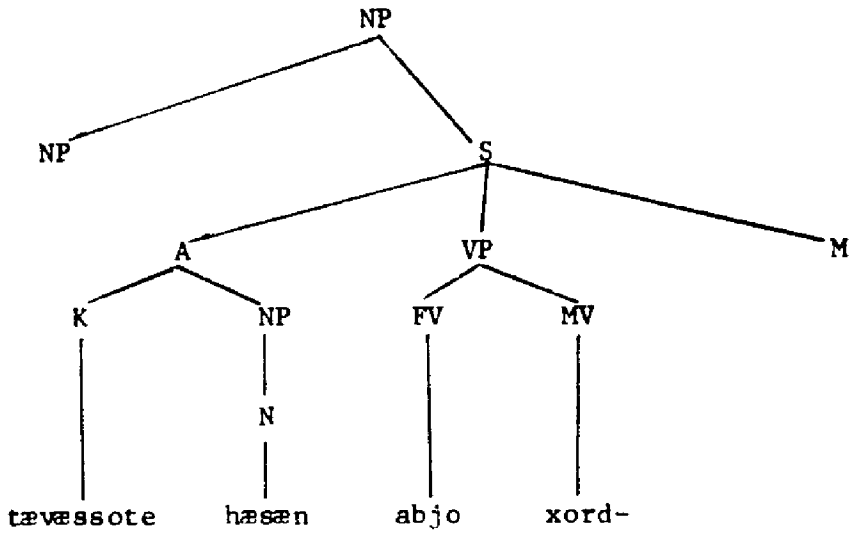
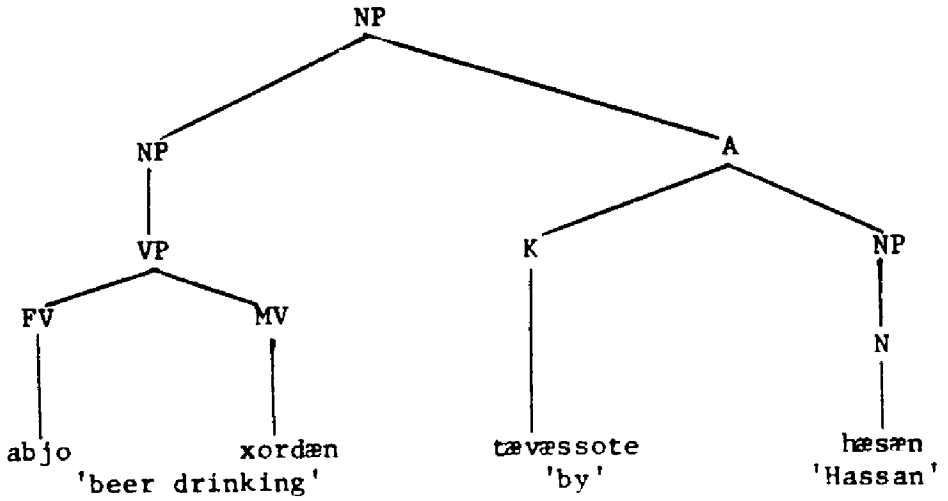
'Hassan'
abjo
'beer'
xord-
'drink'

(404)



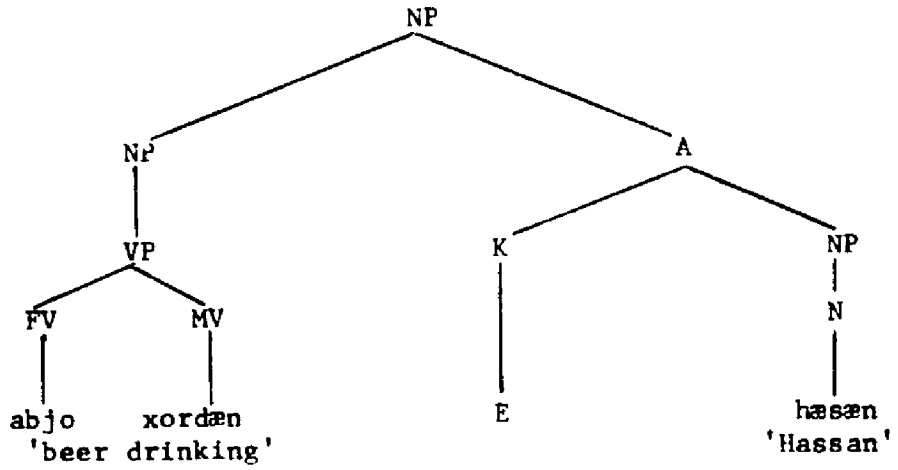
Rule T-8 (VP fronting and M deletion) moves the entire VP to the front of the topmost NP and attaches it to an empty NP label. The M constituent is deleted which accounts for the fact that infinitival forms do not carry tense or aspect information. The MV in the VP is changed to an infinitive. T-8 is stated in this way in order to show that infinitive creation is a regular process which can apply to any VP. The alternative would be to list infinitives in the lexicon separately, and then have them introduced into the head NP constituent in the same way that ordinary nouns are. This second alternative requires a double listing of infinitives and verb stems, which would be uneconomical. Diagram (405, illustrates the application of T-8 to (404).

(405)



T-9 does not apply to (405) because there is no direct object. T-10 does apply. T-10a states that the subject K may optionally be changed into the ezafe. If this option is not taken, then (405) remains unchanged. If the option is taken, then the following structure results.

(406)



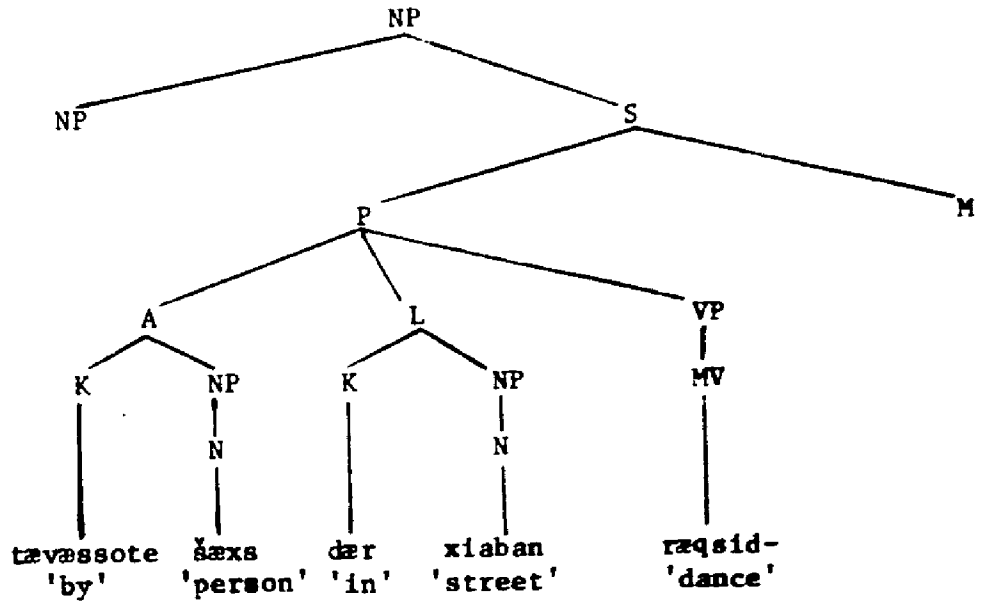
5.2.4 T-10b is needed to derive constructions such as those in 5.1.7 above. In these constructions both an ezafe and a preposition follow an infinitive. The evidence in 5.1.7 suggests that the ezafe is the CASE marker of the deleted surface subject. Thus the two E-constructions below differ only in that rule 10b has been applied in (408) but not in (407).

(407) ræqsidæn-E-šæxs dær xiaban 'a person's dancing in the street'

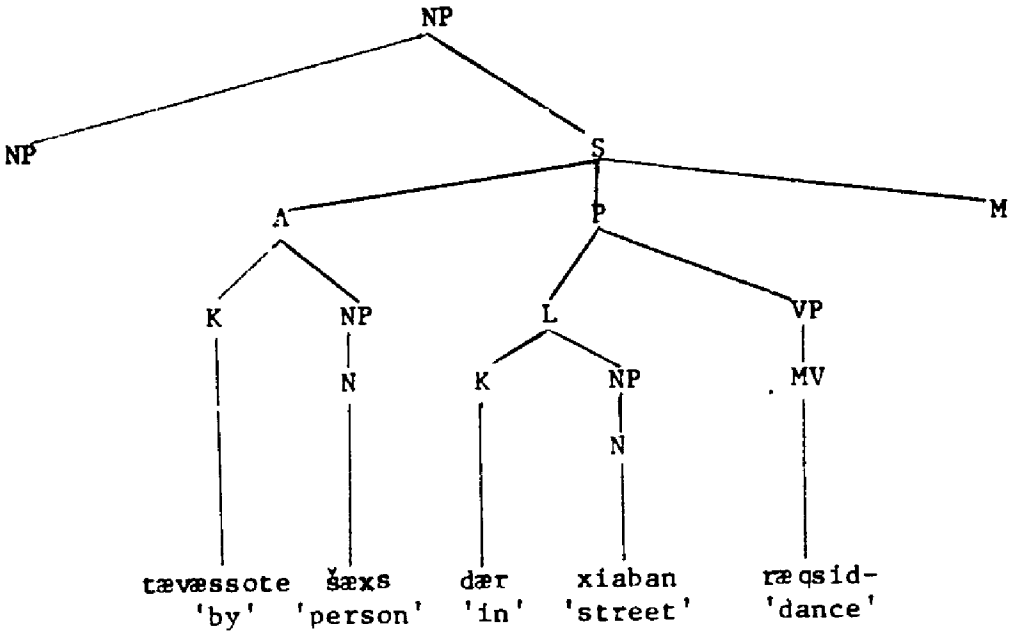
(408) ræqsidæn-E-dær xiaban 'dancing in the street'

The derivation of (407) and (408) is illustrated below. (409) gives the deep structure of both examples. T-1 (subject raising) applies in (410), T-8 (VP fronting) applies in (411), T-10a (E introduction) applies in (412), and T-10b (subject noun deletion), and T-16 (structure reduction) apply in (413).

(409)



(410)


NP
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NP
MV
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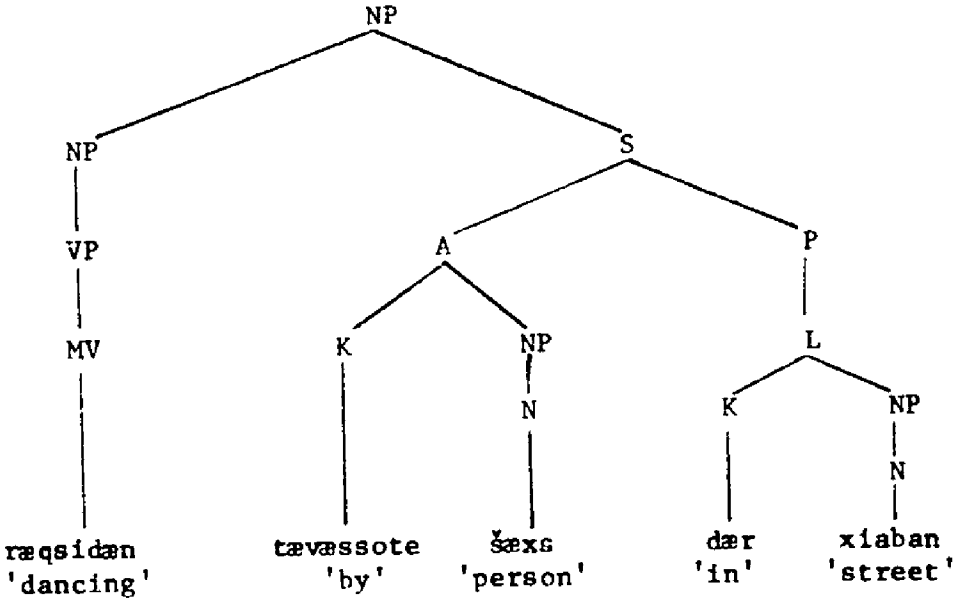
tævæssote
'by'
šæxs
'person'
dær
'in'
xiaban
'street'
ræqsid-
'dance'

(411)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'by'
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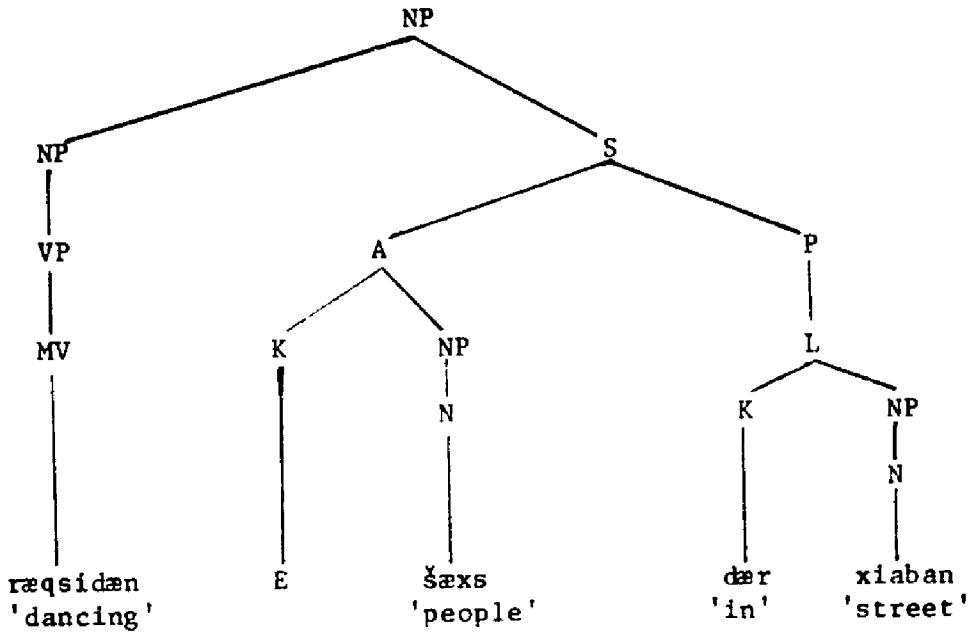
'person'
dær
'in'
xiaban
'street'

(412)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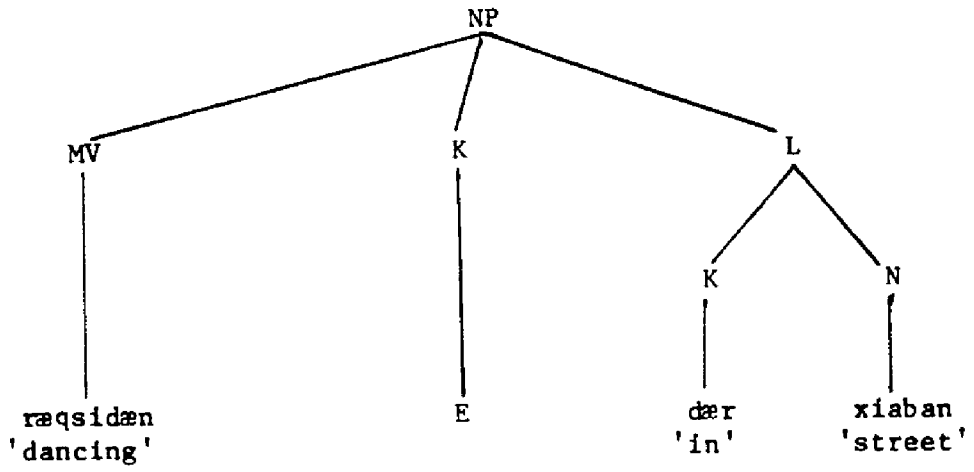
'in'
xiaban
'street'

(413)


NP
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L
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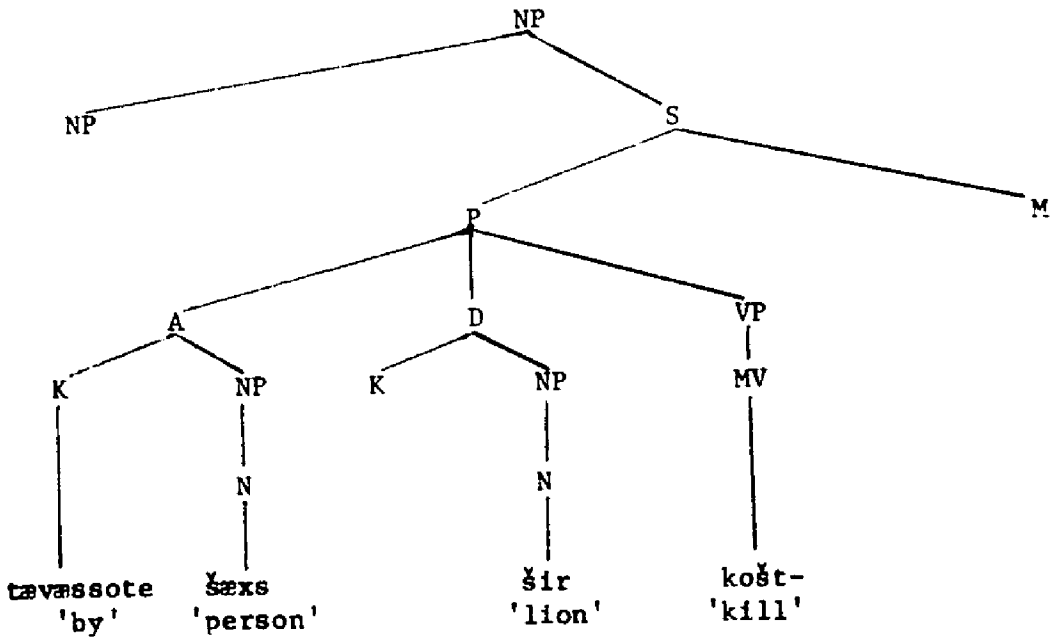
N
ræqsidæn
'dancing'
E
dær
'in'
xiaban
'street'

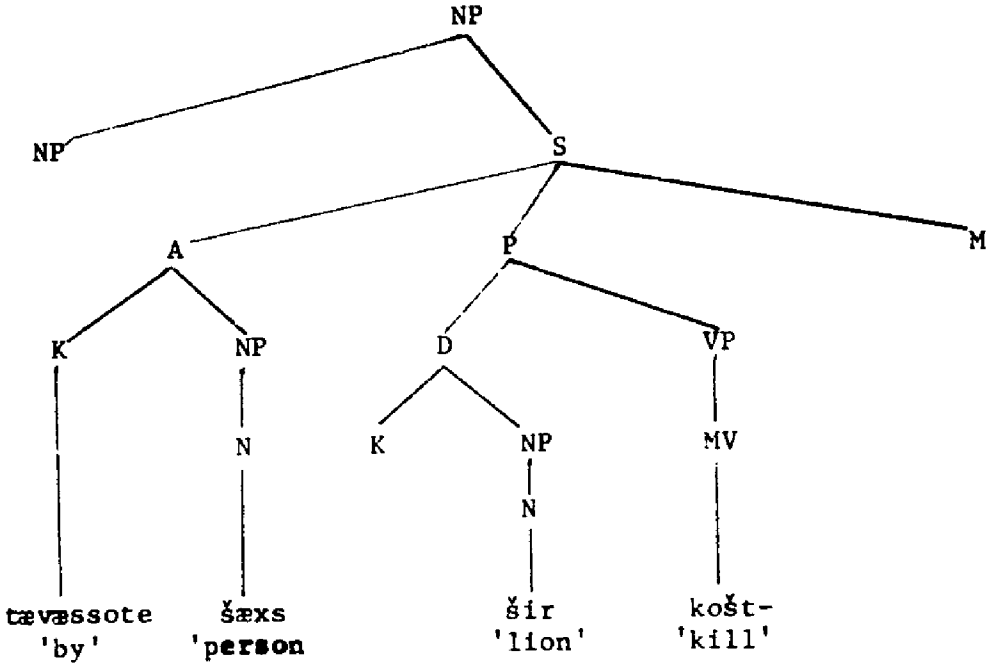
It is not clear whether or not the L NP /dær xiaban/ belongs in the proposition of the deep structure as in (409). Quite possibly the L NP originates in the M constituent as an adverbial phrase. This alternative interpretation would not change the derivation above since the application of T-10 depends only upon the absence of a direct object in the structure.

5.2.5 T-9 applies to a structure containing a direct object as is illustrated in 5.1.3 above. T-9 states that the CASE marker of the direct object is changed to the ezafe, following which the subject NP must be either deleted or moved to a position following the direct object NP. The following derivation illustrates how the E-construction /koštæn-E-šir/ 'killing the lion' is derived from its underlying deep structure. The deep structure is given in (414). T-1 applies in (415), T-8 in (416), and T-9a in (417).

(414)



(415)


NP
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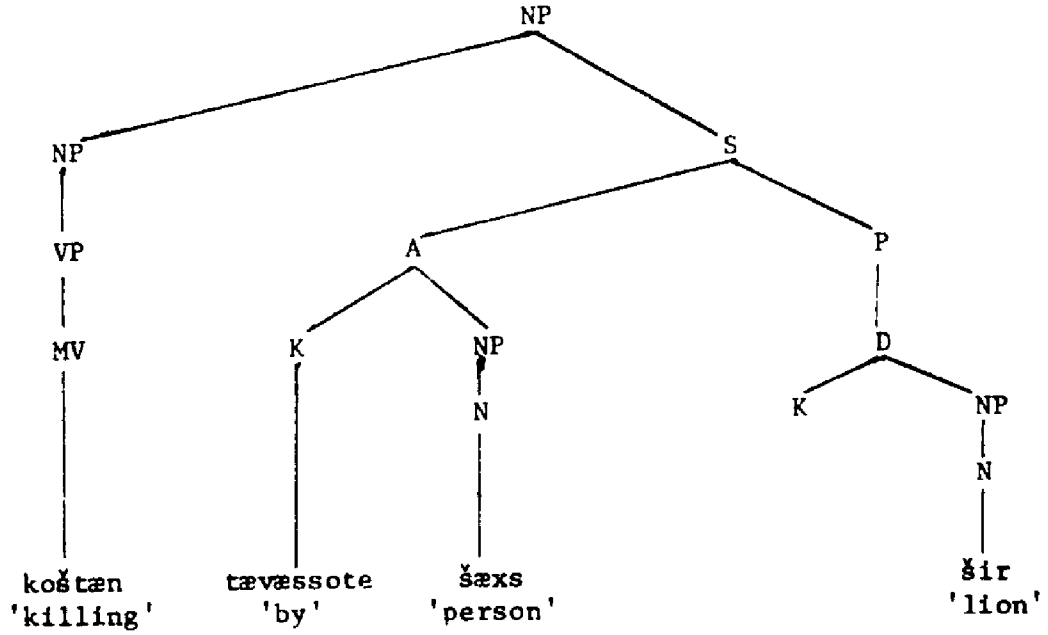
tævæssote
'by'
šæxs
'person
šir
'lion'
košt-
'kill'

(416)


NP
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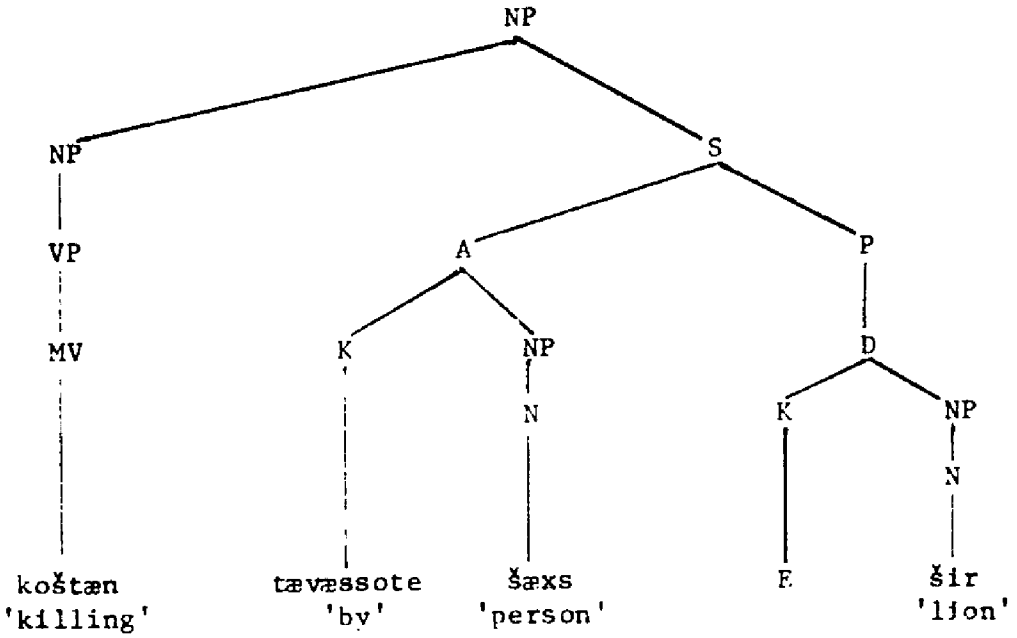
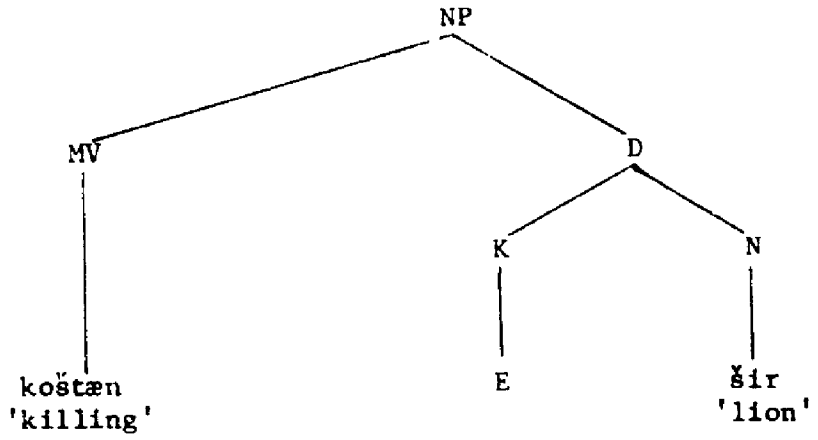
'killing'
tævæssote
'by'
šæxs
'person'
šir
'lion'

(417)

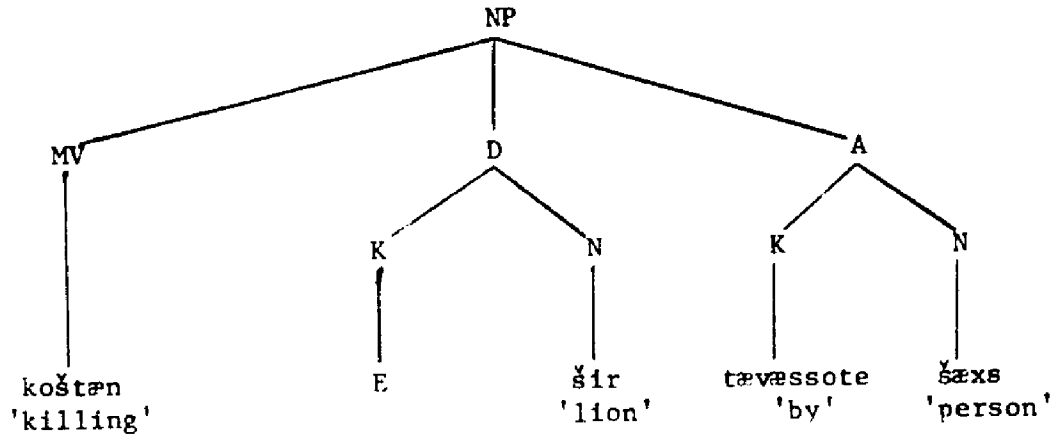


Following the application of T-9a, T-9b either deletes the subject NP as illustrated in (418) or moves it to a position following the direct object as illustrated in (419). In both diagrams T-16 (structure reduction) is also applied.

(418)



(419)


NP
MV
D
A
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N
K
N
koštæn
'killing'
E
šir
'lion'
tævæssote
'by'
šæxs
'person'

FOOTNOTES

CHAPTER FIVE

[1]Moyne 1970, p. 65, also notes this fact about the constituents of a compound verb. He does not, however, establish an independent constituent, such as fore-verb, as I do. The structure proposed by Moyne for what I call the verb phrase is N + V.

[2]Cf. Section 5.1.6 for this argument.

[3]Cf. Section 5.1.9.

[4]Cf. Section 5.2.4.

CHAPTER SIX

POSSESSION

The purpose of this chapter is to account for E-constructions, and other related constructions, in which the "possession" relationship is expressed. The first part of the chapter is devoted to a discussion of the possessive constructions in terms of paraphrase relationships and differences between alienable and inalienable possession. The second part presents the deep structure differences between the two types of possession as well as the transformational rules which enable the structures shown in the first section to be derived from deep structures.

6.1 The Data.

6.1.1 The relationship between the surface grammatical relationships "indirect object" and "possession" is shown in the following examples where 'Hassan', who is the recipient of an object in (420), comes to possess that object in (421). /hæsæn/ is in the D CASE in both (420) and (421).

(420) mæn ketab-ra be hæsæn dadæm 'I gave the book to Hassan.'

(421) hala hæsæn ketab-ra daræd 'Now Hassan has the book.'

A relationship also exists between objects located with respect to other objects, and the use of the verb /dašt-/ 'have' to indicate possession. This is shown in the following examples.

(422) tuye in mænzel pænj otaq hæst

'There are five rooms in this house.'

(423) in mænzel pænj otaq daræd

'This house has five rooms.'

6.1.2 There are two types of possession in MSP.[1] In one of them, the possessed object is considered to be inalienably attached to the possessor. Body parts are such objects. The object does not normally have an existence independent of its possessor. In the following E-construction, the hand mentioned is not considered to exist independently of Hassan.

(424) hæsæn dæst daræd 'Hassan has a hand.'

In the second type of possession, alienable or true possession, the object can exist independently of its possessor. One would not normally need to think of the object as possessed in order to refer to it. The following E-construction illustrates alienable possession.

(425) hæsæn ketab-ra daræd 'Hassan has the book.'

When an object is inalienably possessed there are at least two constructions in which that noun cannot be used. One such construction is the restrictive relative clause, in which an inalienably possessed noun cannot occupy the head-noun position. In the following examples, body parts are used as inalienably possessed objects.

(426) ketab-i ke hæsæn daræd geran æst

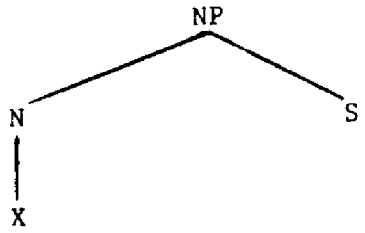
'The book that Hassan has is expensive.'

(427) *dæst-i ke hæsæn daræd kæsif æst

*'The hand that Hassan has is dirty.'

In example (427) /dæst/ 'hand' is not understood as a part of Hassan. For the construction to be acceptable, /dæst/ must be understood as being someone else's hand which Hassan is holding. These examples show that inalienably possessed nouns must not be used in the position marked "X" in the following structure, since the S must not modify an inalienably possessed noun.

(428)



6.1.3 Possession can be expressed in at least three ways when an object is not inalienably possessed.

(429) hæsæn ketab-ra daræd 'Hassan has the book.'

(430) ketab mal-E-hæsæn æst 'The book belongs to Hassan.'

(431) ketab-E-hæsæn 'Hassan's book'

When an object is inalienably possessed, the use of /mal-/ 'property' to express possession is incorrect.

(432) *an dæst mal-E-hæsæn æst

*'That hand belongs to (or is the property of) Hassan.'

(432) would be acceptable only if the hand were not Hassan's.

6.1.4 When an inalienably possessed noun is modified by an adjective in an E-construction, the possessor must follow the adjective.

(433) dæst-E-kæsif-E-hæsæn 'Hassan's dirty hand'

Constructions such as (433) can be paraphrased by replacing the ezafe which joins the adjective to the head-noun with a relative clause marker. The relative clause thus formed can occur only after the possessor.

(434) dæst-E-hæsæn ke kæsif æst 'Hassan's hand, that is dirty'

(435) *dæst-E-kæsif-i ke hæsæn daræd
*'the dirty hand that Hassan has'

(436) *dæst-i ke kæsif æst-E—hæsæn daræd

(437) *dæst-i ke kæsif æst ke hæsæn daræd
*'the hand that is dirty that Hassan has'

I have suggested that the E-construction occurs as the result of two stages of structure reduction, the first stage being the conversion of an embedded sentence into a relative clause.[2] This implies that the relative clause construction is closer to the deep structure representation than is the E-construction. This argument and the examples above suggest that in the <u>deep structure</u> of multiple E-constructions such as (433), the adjectival modifier /kæsif/ 'dirty' <u>follows</u> the possessor /hæsæn/ 'Hassan'.

In constructions similar to (433) but containing an alienably possessed noun, the possessor also always occurs last in the E-construction.

In such constructions, however, either the adjectival modifier or the possessor may be contained in a relative clause.

(438) ketab-E-geran-E-hæsæn 'Hassan's expensive book'

(439) ketab-E-geran-i ke hæsæn daræd
'the expensive book that Hassan has'

(440) ketab-E-hæsæn ke geran æst
'Hassan's book, that is expensive'

6.1.5 Both examples (433) and (438) have two paraphrases as illustrated below.

(441) dæst-E-hæsæn kæsif æst 'Hassan's hand is dirty.'

(442) hæsæn dæst-E-kæsif-i daræd 'Hassan has a dirty hand.'

(443) ketab-E-hæsæn geran æst 'Hassan's book is expensive.'

(444) hæsæn ketab-E-geran-i daræd
'Hassan has an expensive book.'

6.1.6 Alienably and inalienably possessed nouns do not function differently in non-restrictive relative clauses as the examples below illustrate.

(445) an doxtær ketab-i daræd ke æz hær ketab gerantær æst
'That girl has a book which is more expensive than any other book.'

(446) an doxtær ceŠm-i daræd ke æz ceŠm-E-hær-doxtær gæŠængtær æst
'That girl has eyes that are more beautiful than the eyes of any other girl.'

6.1.7 The possessor noun in E-constructions can be replaced by a NP which is also an E-construction.

(447) ketab-E-dust-E-mæn 'my friend's book'

(448) cesm-E-dust-E-mæn 'my friend's eyes'

6.1.8 Nouns denoting either alienably or inalienably possessed objects can occur as the direct object of an infinitive, either preceding or following that infinitive.[3]

(449) dæst daštæn-E-šæks mohemm æst

'A person's having hands is important.

(450) pul daštæn-E-šæks mohemm æst

'A person's having money is important.

(451) daštæn-E-dæst mohemm æst

'Having hands is important.'

(452) daštæn-E-pul mohæmm æst

'Having money is important.'

6.2 The Analysis. The transformational rules which will be used in this chapter are the following.[4]

(453) T-1 Subject raising

T-2 Identical noun copy

T-3 /ke/ introduction

T-5 /ke/ $\Longrightarrow$ E

T-6 FV fronting

T-7 FV creation

T-8 VP fronting and M deletion

T-11 K $\Longrightarrow$ E

T-12 D movement

T-14 Identical N (or NP) deletion

T-15 M and MV deletion

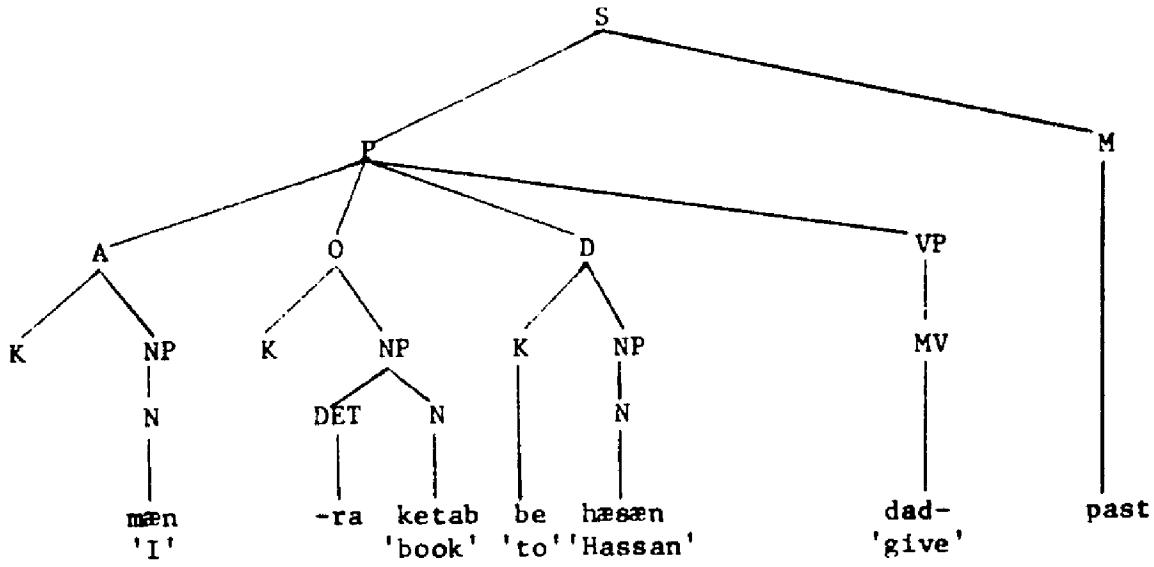
T-16 Structure reduction

T-17 Final rules

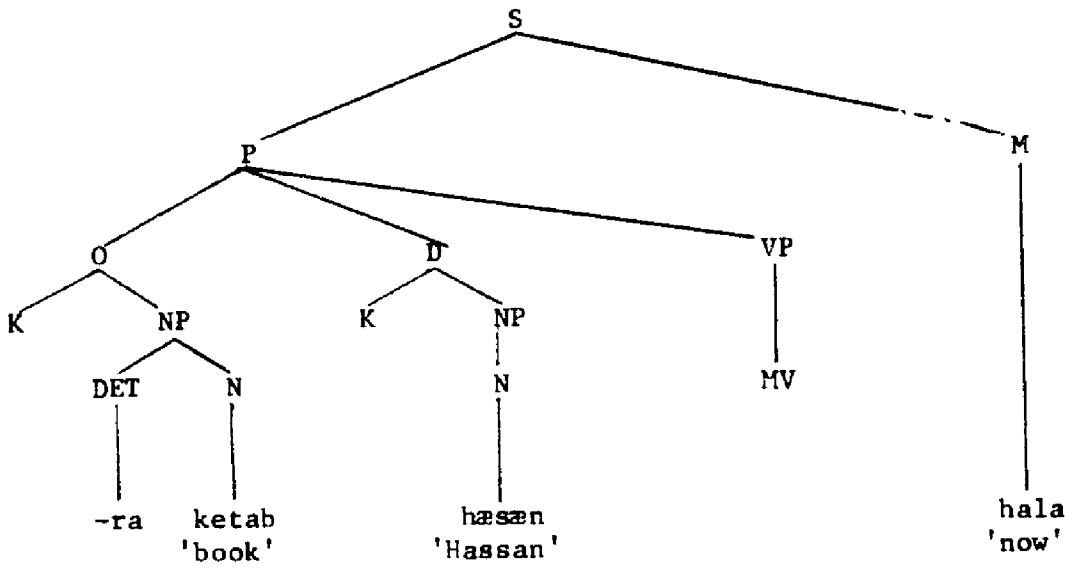
T-18 D raising[5]

6.2.1 The constant relationships in examples (420) and (421) are indicated by the D CASE of the possessor and the O CASE of the possessed object. (454) gives the deep structure of (420). (455) gives the deep structure of (421).

(454)



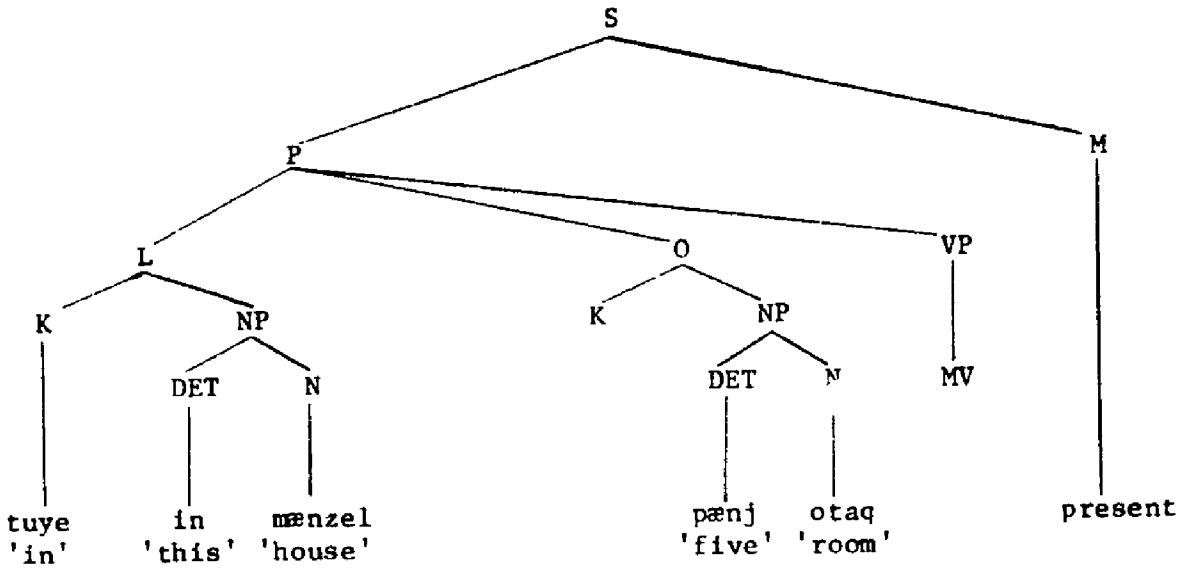
(455)



In (454) and (455) the nouns /ketab/ 'book' and /hæsæn/ 'Hassan' are related to each other under P through identical CASE labels. From this we can predict that surface structures containing these nouns will be related to some degree. The presence of an additional A CASE, as well as the presence of the verb /dad-/ 'give' in (454), explain why sentences (420) and (421) are only partial paraphrases.

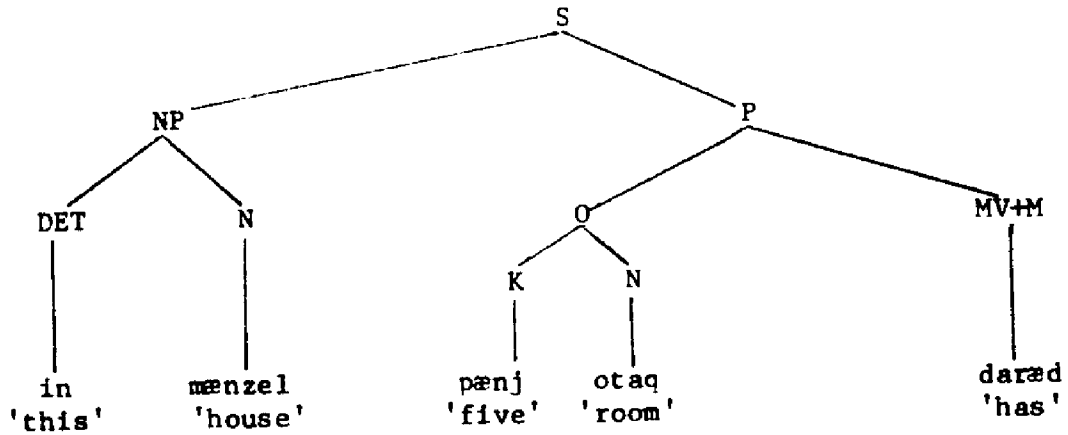
Sentences (422) and (423) have identical deep structures. The deep structure is given in (456).

(456)



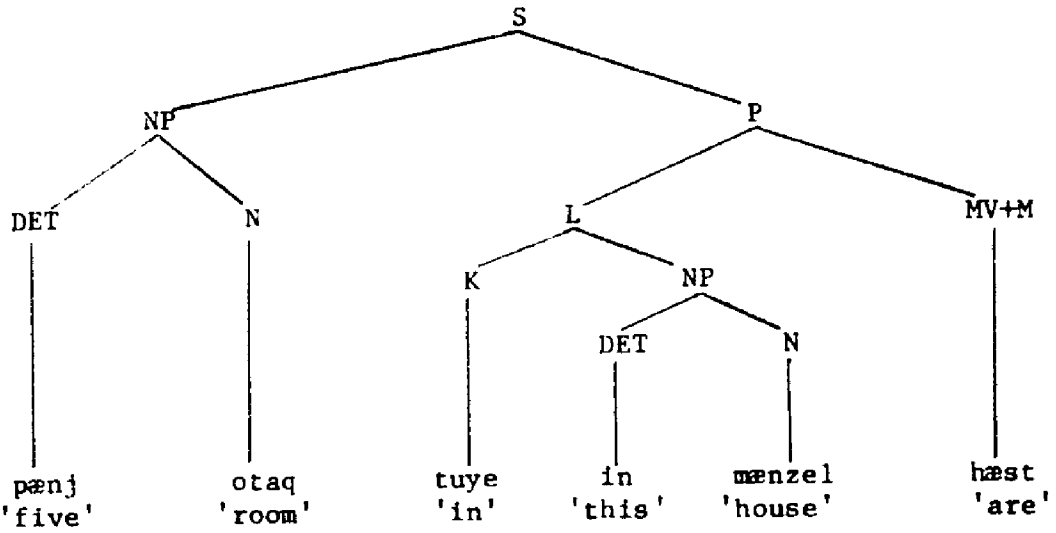
The introduction of the MV /dašt-/ 'have' into the empty MV constituent in (421) and (423) is automatic when either a D or L NP is made the subject of a sentence having a deep structure such as (456).[6] The surface structure of (423) results from subject raising and /dašt-/ introduction.

(457)



The introduction of the copula /bud-/ into the empty MV of (456) is automatic when the 0 NP is made the subject of a sentence having a deep structure such as (456).[7] The surface structure of (422) results from 0 raising and /bud-/ introduction.

(458)



6.2.2 In the lexicon, a noun which is inalienably possessed is restricted according to the following convention:

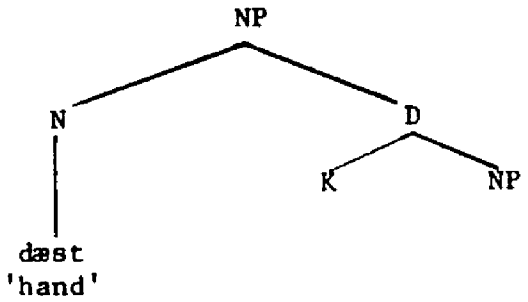
(459) "Noun" [____CASE]

This means that the noun can only be inserted into a tree when it is directly followed by the specified CASE. Thus, the inalienably possessed noun /dæst/ 'hand' would be entered into the lexicon as follows:

(460) /dæst/ [____D]

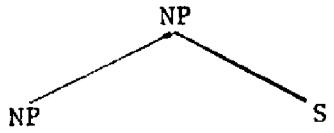
Marked as such, /dæst/ can only occur in a deep structure such as (461).

(461)



The requirement that /dæst/ be followed by D both insures that it will be attributed to an animate being and prevents it from being directly followed by S.[8] Therefore, /dæst/ cannot be directly modified by a restrictive relative clause since the latter is derived from a structure such as the following:[9]

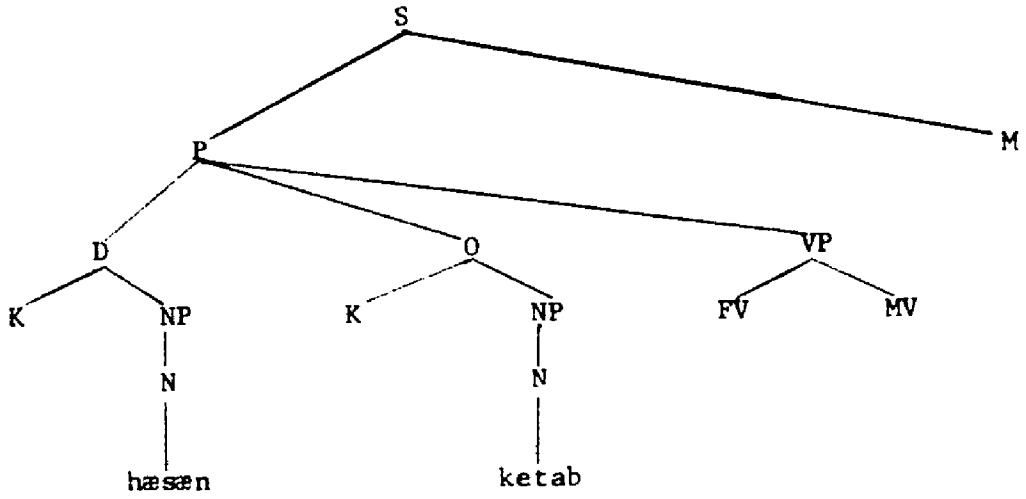
(462)



A noun which is not inalienably possessed is not restricted to a position directly followed by a CASE. Therefore, it can be followed by a S modifier which is converted into a relative clause.[10]

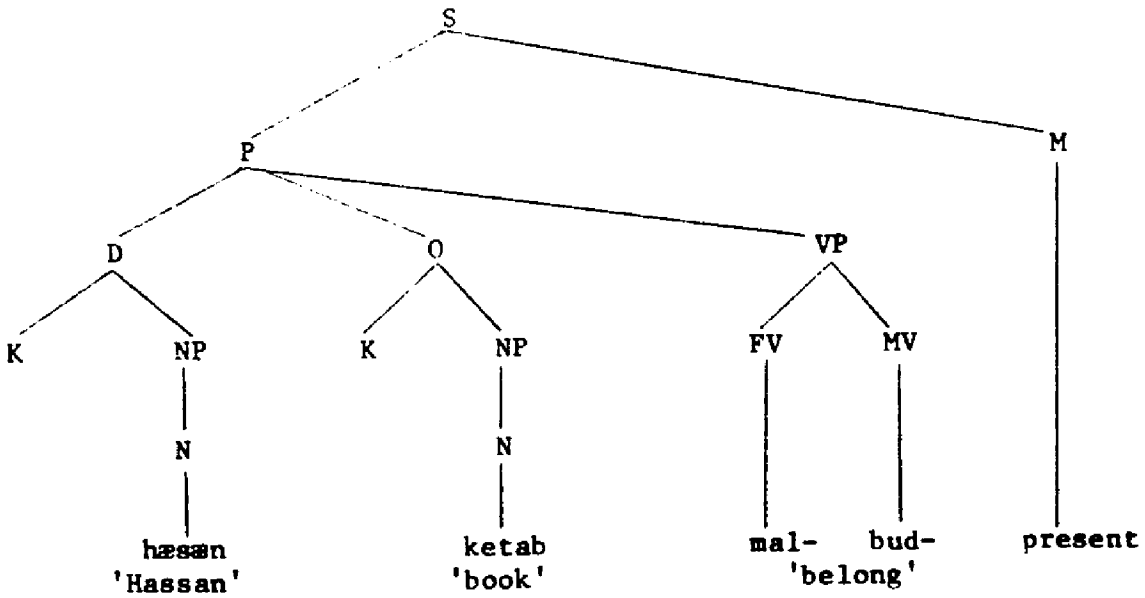
6.2.3 Alienable possession can be expressed in sentences containing either the MV /dašt-/ 'have' or the VP /mal-bud-/ 'belong to' as illustrated in 6.1.3 above. The deep structure representation of both sentence (429) and sentence (430) is the following:

(463)

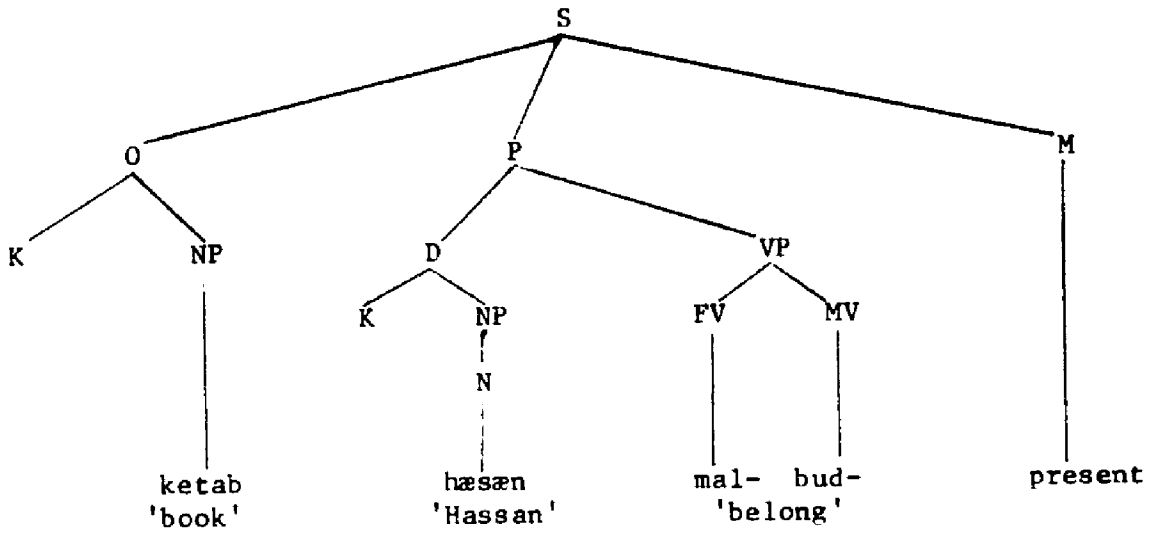


If /mal-/ is interpreted as a fore-verb which takes the MV /bud-/, and if /mal-/ is the kind of fore-verb which must be fronted in P, then (430) is derived by using only existing transformational rules. The deep structure of (430) is given in (464). Applying T-1 gives (465).[11]

(464)

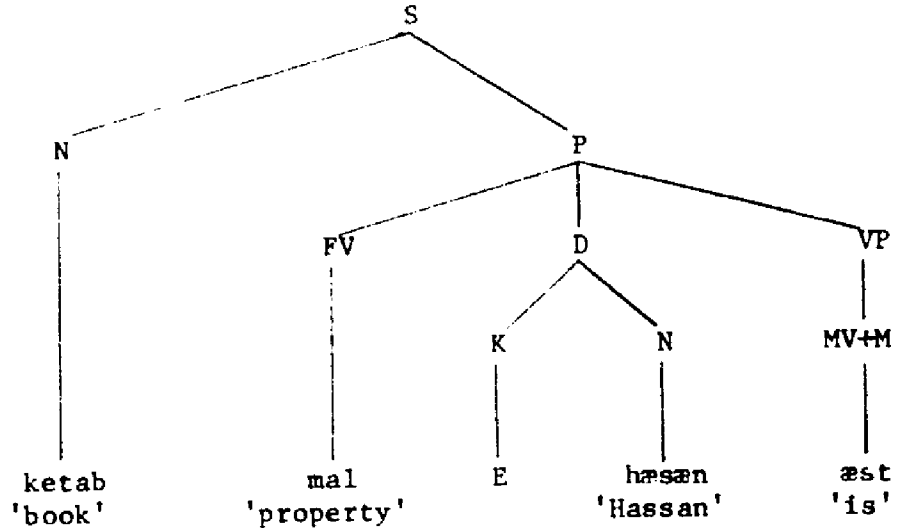


(465)



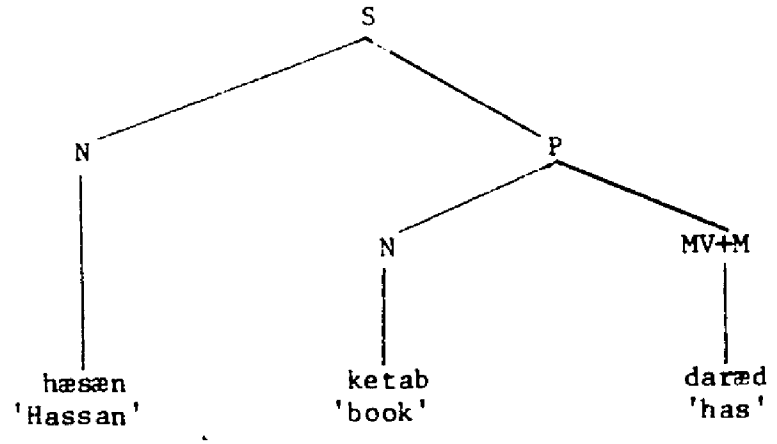
Applying T-6 (FV fronting) and T-16 (structure reduction) gives the surface structure in (466).

(466)



(463) is equivalent to (464) except that the VP is empty in (463). If D in (463) is raised to the subject position, the MV /dašt-/ will be introduced into the empty MV constituent.[12] T-16 (structure reduction) and T-17 (final rules) will then yield the following surface structure:

(467)

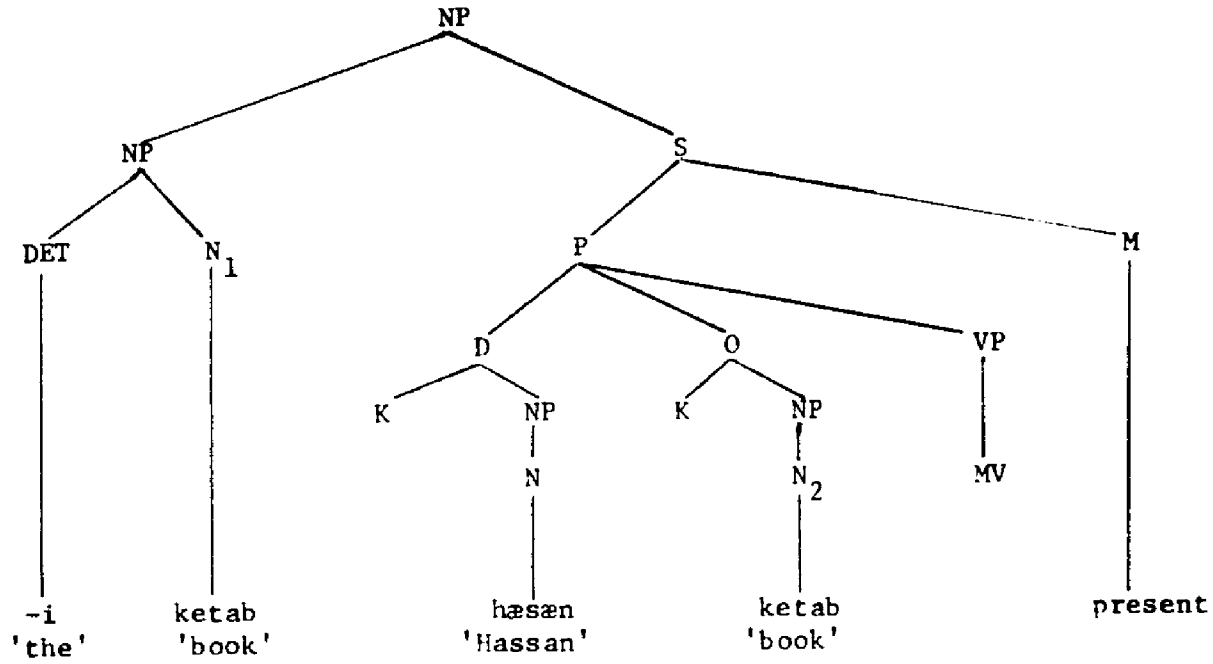


The E-construction /ketab-E-hæsæn/ 'Hassan's book' is related by paraphrase to the following restrictive relative clause construction.

(468) ketab-i ke hæsæn daræd 'the book that Hassan has'

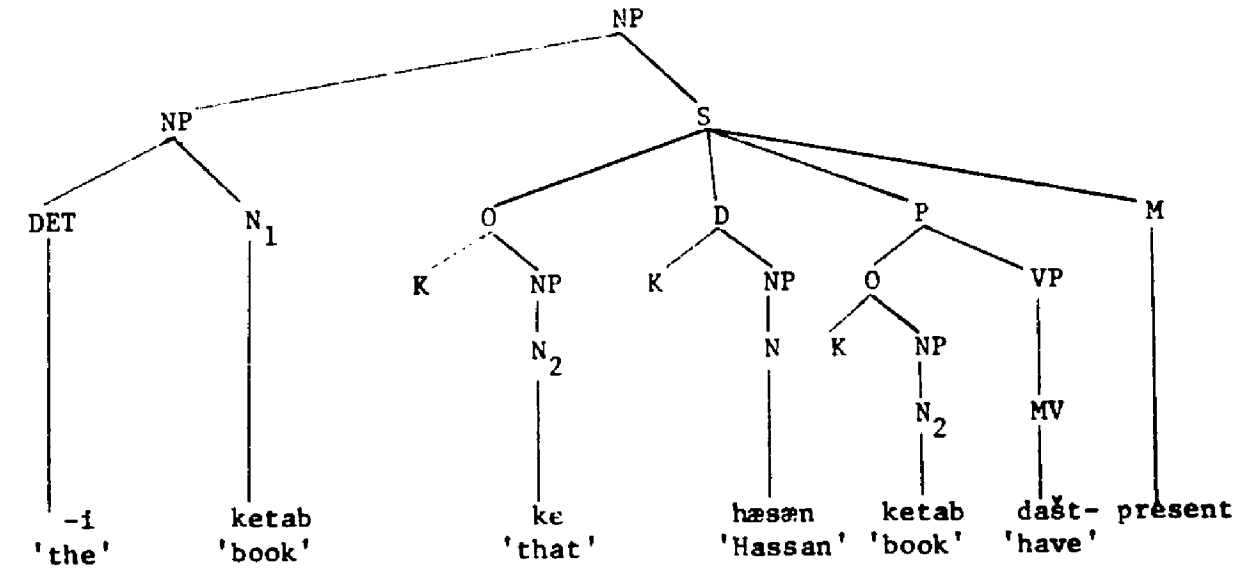
Both the E-construction and the relative clause (468) have the same deep structure. This is shown in (469).

(469)



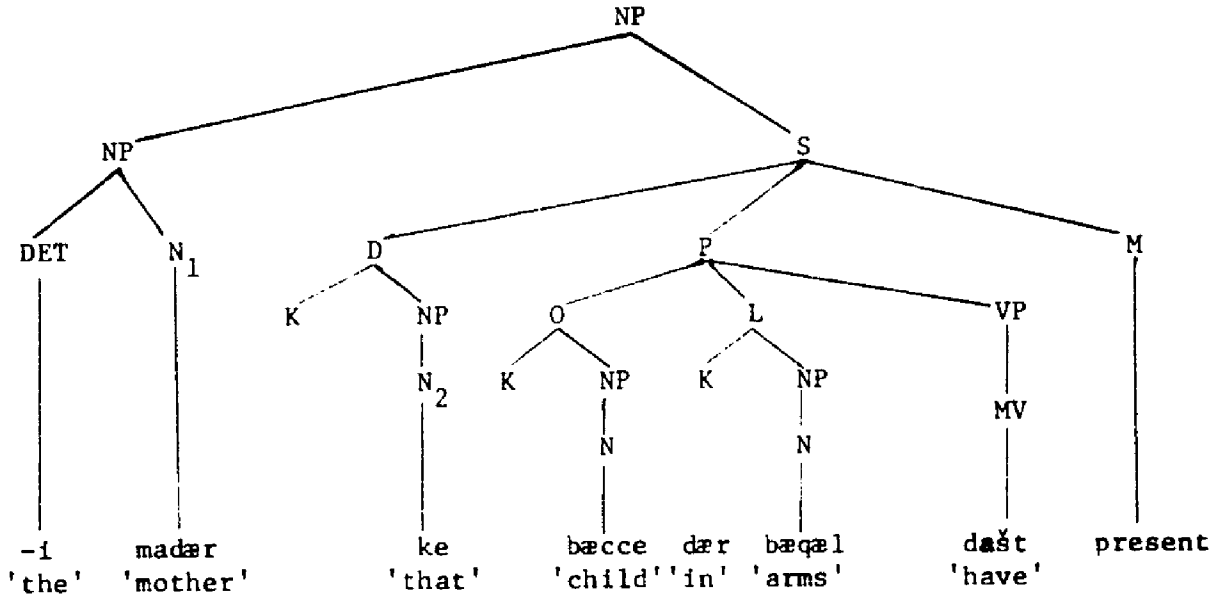
The steps in the derivation of (468) have been shown in detail.[13] At an intermediate point in this derivation (after T-1, T-2, and T-3) the structure is the following:

(470)



The structure in (470) is quite different from the structure of another relative clause, discussed in Chapter Four, which also contains the MV /dašt-/.[14] It is reproduced in (471) so that the two structures may be compared.

(471)



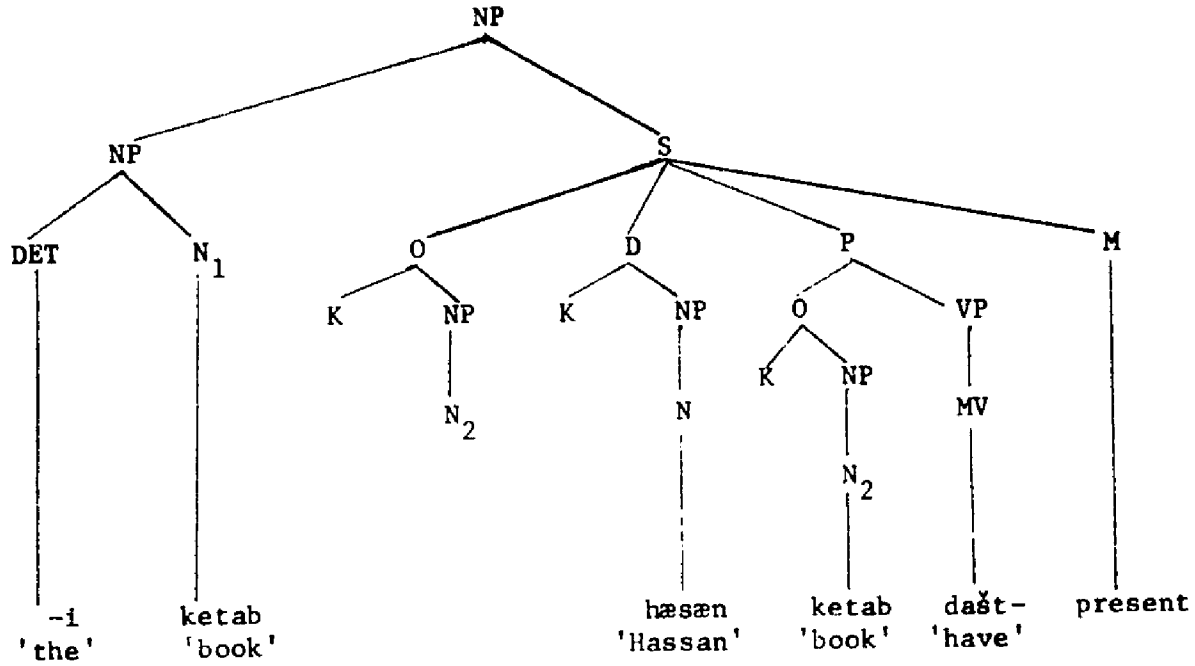
In (471), /ke/ is derived from the subject of the embedded sentence. In (470), /ke/ is derived from the copied direct object. Rule T-5 converts /ke/ to E only when /ke/ is derived from the surface subject of an embedded S.[15] The remainder of T-5 states that /ke/ is deleted elsewhere. T-5 is summarized as follows:

(472) T-5 a. /ke/ $\Longrightarrow$ E when /ke/ is derived from the subject of the embedded sentence.

b. Delete /ke/ elsewhere.

T-5a does not apply to (470). T-5b does apply, and it deletes /ke/. The resulting tree is the following:

(473)

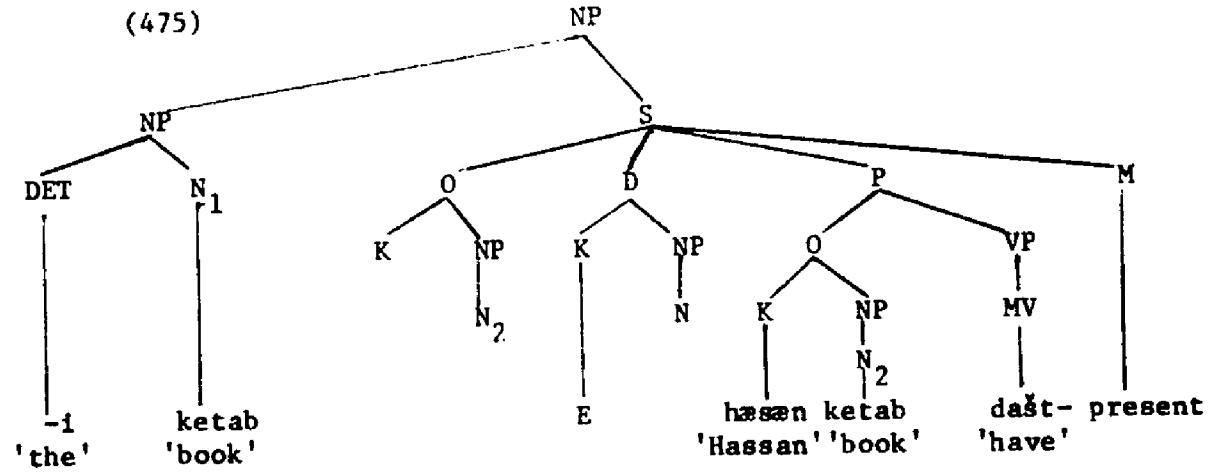


T-7 through T-10 apply only to infinitival E-constructions. T-11 provides for E introduction in possessive structures.

(474) T-11 Introduce E into the empty K of either a D or a L CASE.

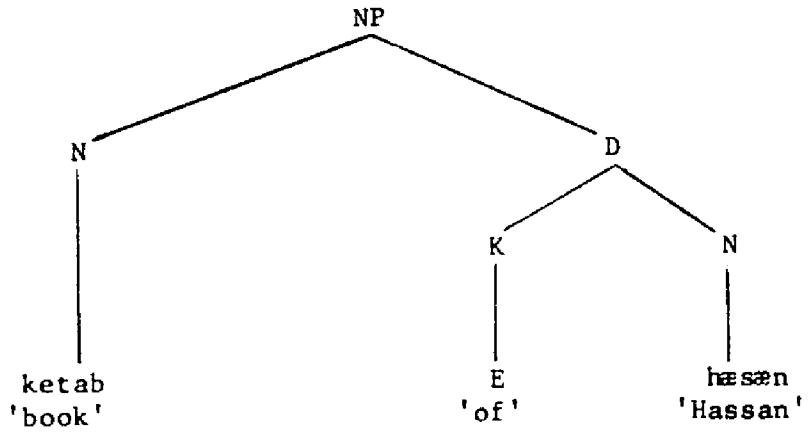
T-11 introduces E into the K of the D NP of (473). The resulting structure is the following.

(475)



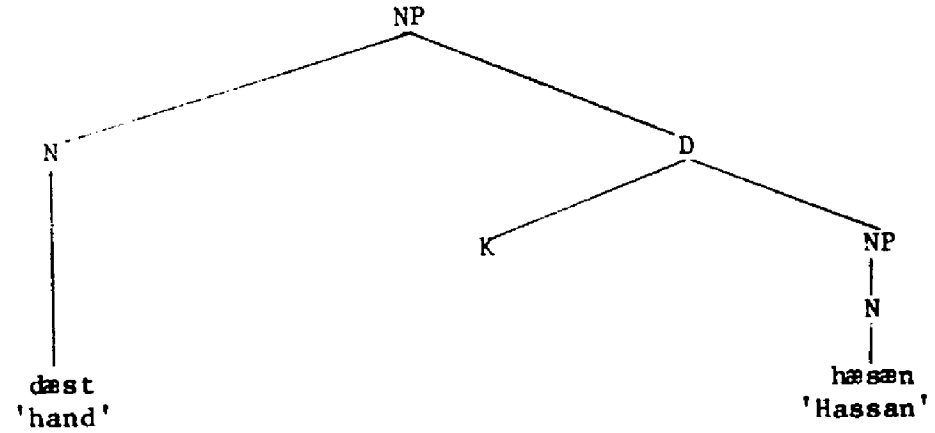
T-14 (identical N deletion), T-15 (M and MV deletion) and T-16 (structure reduction) apply to (475) giving the following surface structure:

(476)



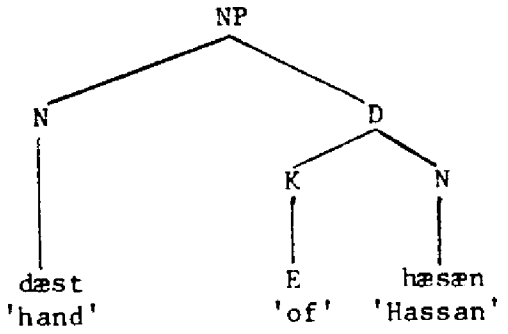
When a noun is inalienably possessed, the deep structure in which it occurs will be nearly equivalent to the surface structure illustrated in (476). The deep structure which contains an inalienably possessed noun is shown below in (477).

(477)



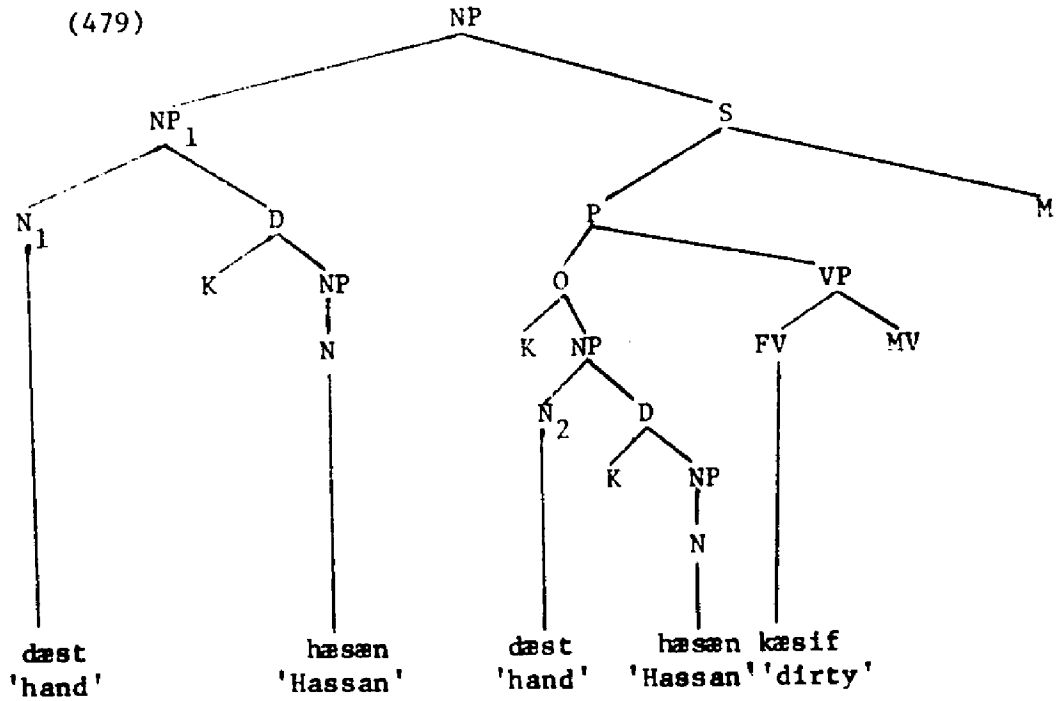
T-11 will also introduce E into the K of the D CASE in (477). The surface structure of (477) is the following:

(478)



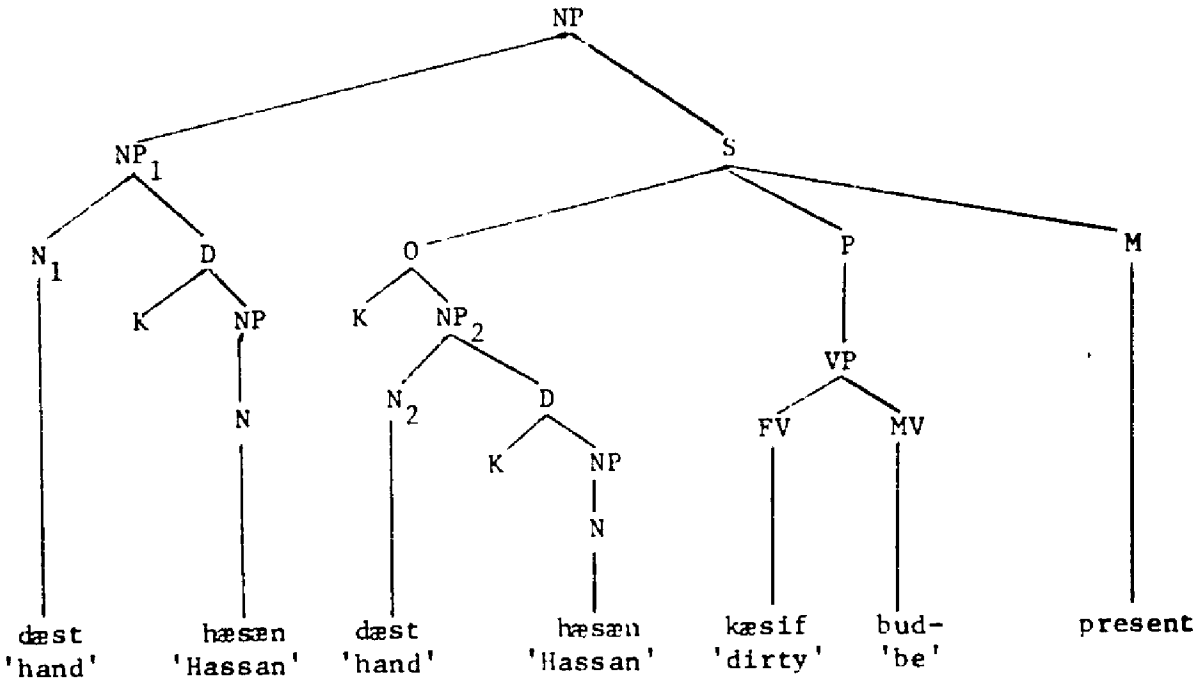
2.4 An inalienably possessed noun which is also modified by an adjective in an E-construction only has one paraphrase involving a relative clause (see 6.1.4 above). This paraphrase is accounted for by the following deep structure and the transformations which apply to it.[16]

(479)



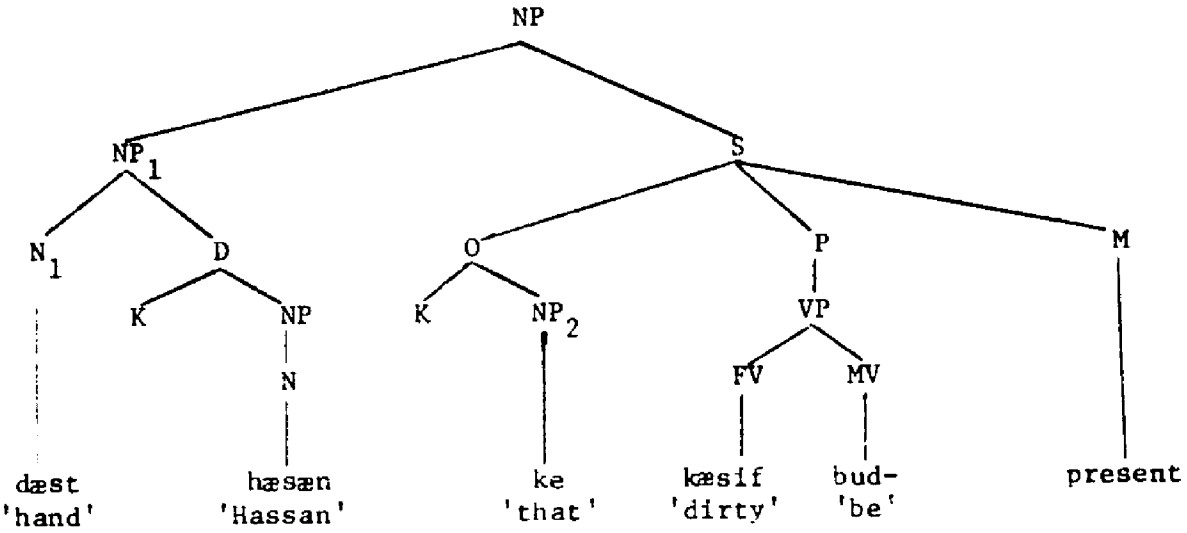
In (479) the order of the constituents is as follows: inalienably possessed noun, possessor, adjective. This order is correct for the first stage of nominalization, which is the relative clause. The deep structure contains only one embedded S, thus it permits only one relative clause to be derived. The derivation of (434) is illustrated below. First T-1 applies giving (480).

(480)



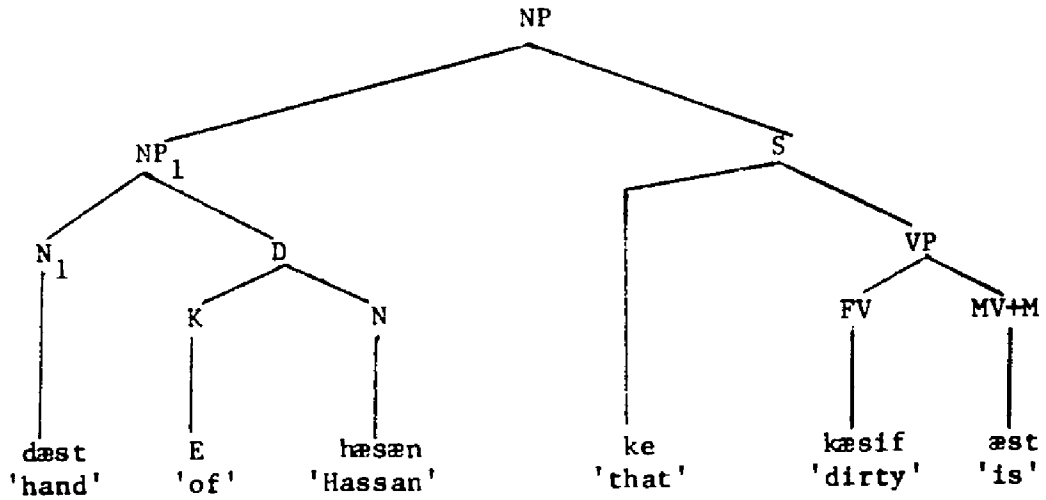
The structure in (480) shows the need for a revision of rule T-3. Originally T-3 was stated so that the identical noun N_2 would be pronominalized to /ke/.[17] In (480) an entire NP (NP_2) is identical to the head NP (NP_1). Therefore, T-3 must pronominalize the identical NP to /ke/. This revision is shown in (481) where the relative pronoun is dominated by the symbol NP.

(481)



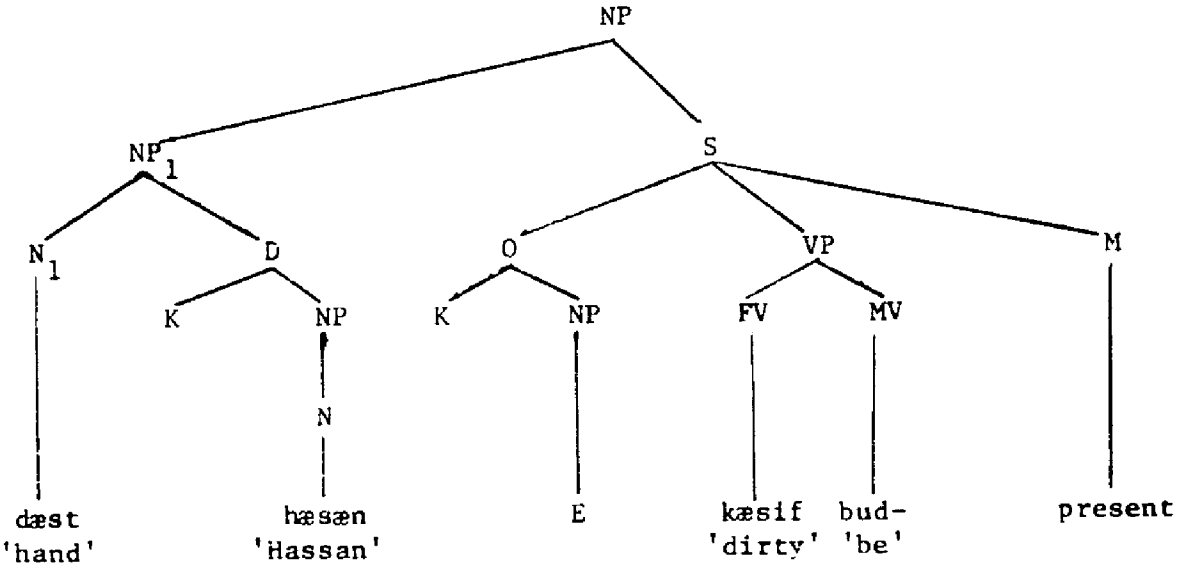
T-16 (structure reduction) and T-17 (final rules) apply to produce the following surface structure. The NP label is deleted as required by T-16.[18] E is introduced into the K of the D CASE by T-11.

(482)



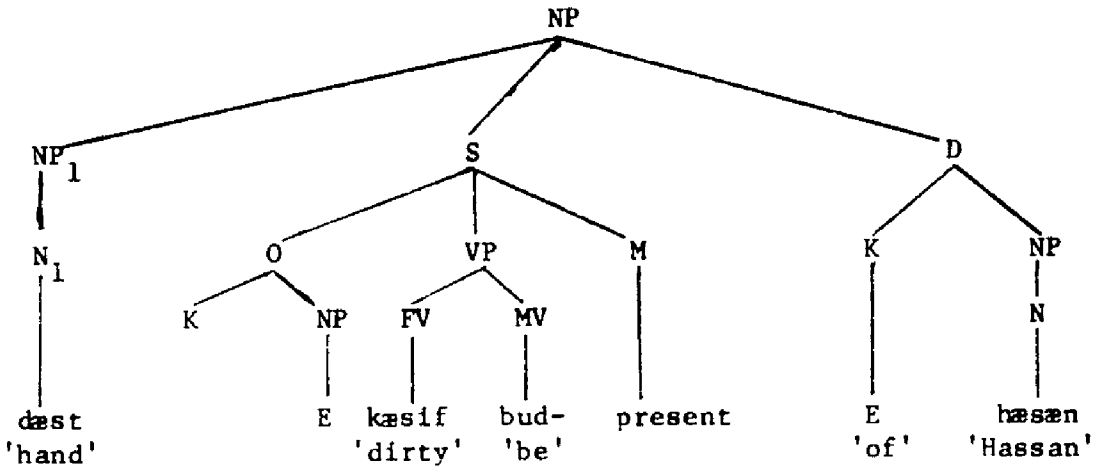
The relative clause shown in (482) can be reduced to the E-construction /dæst-E-kæsif-E-hæsæn/'Hassan's dirty hand'. The stage of the derivation shown in (441) is the point at which the rules creating the E-construction begin to apply. First T-5 applies in S, converting the /ke/ into the ezafe. This is shown in (483).

(483)



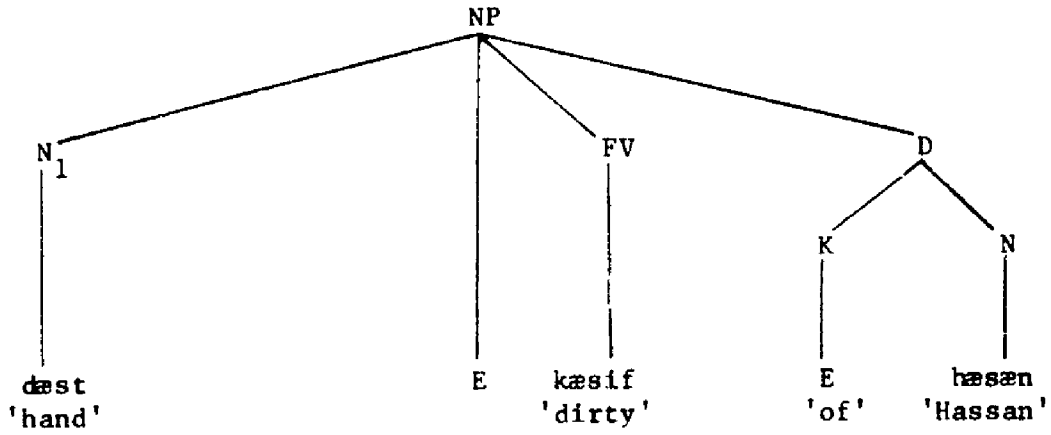
T-11 will introduce the ezafe under the K of the D CASE. Then a transformation is needed to move the D NP to the final position in the E-construction. T-12 performs this function as is illustrated in (484).

(484)



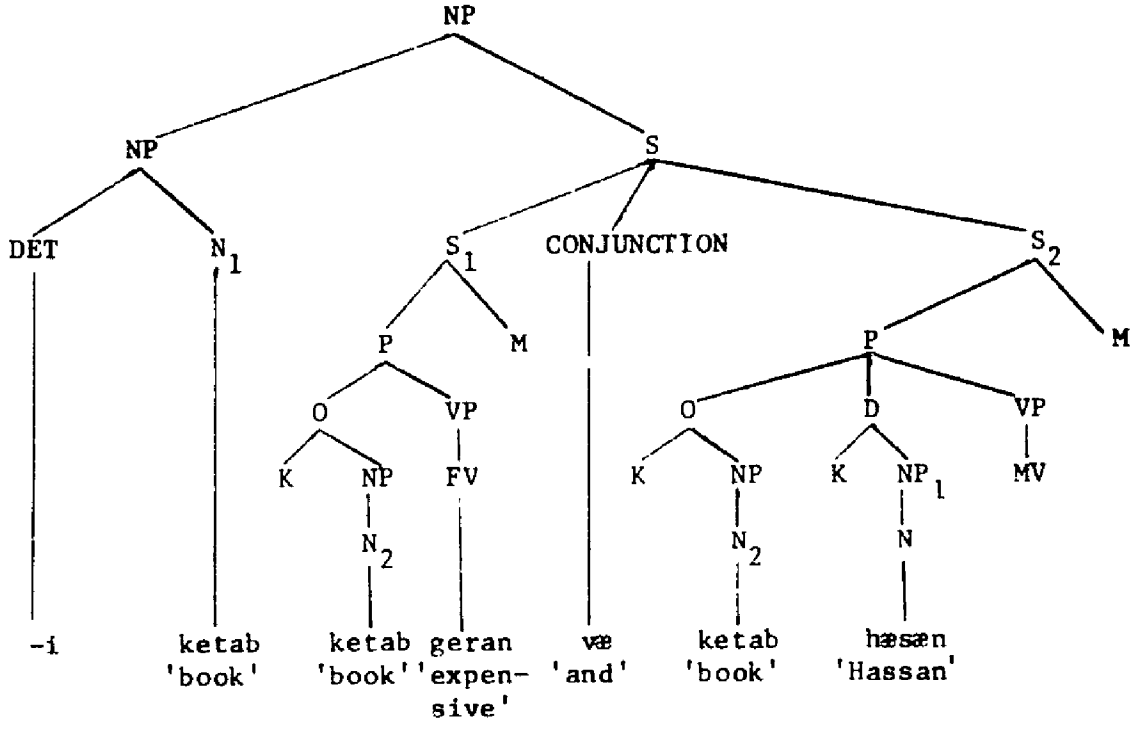
T-15 (M and MV deletion) and T-16 (structure deletion) apply, giving the following surface structure.

(485)



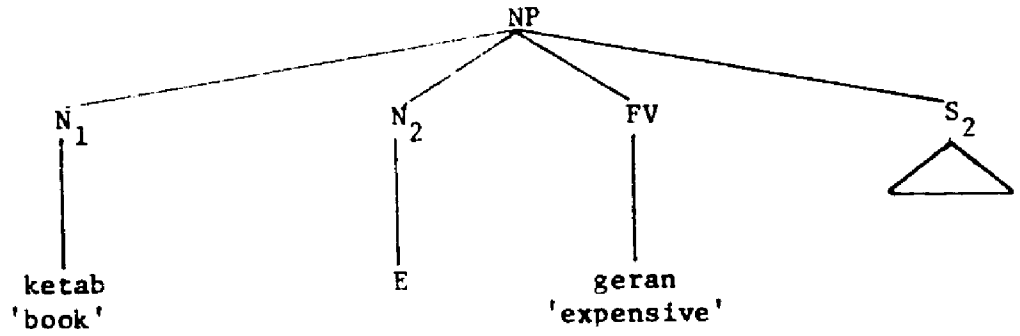
Examples (438-440) show that when an object is alienably possessed and modified by an adjective, either the adjective or the possessor may be contained in a relative clause. The following is the deep structure of (438-439). It shows both the adjective and the possessor contained in sentence modifiers.

(486)



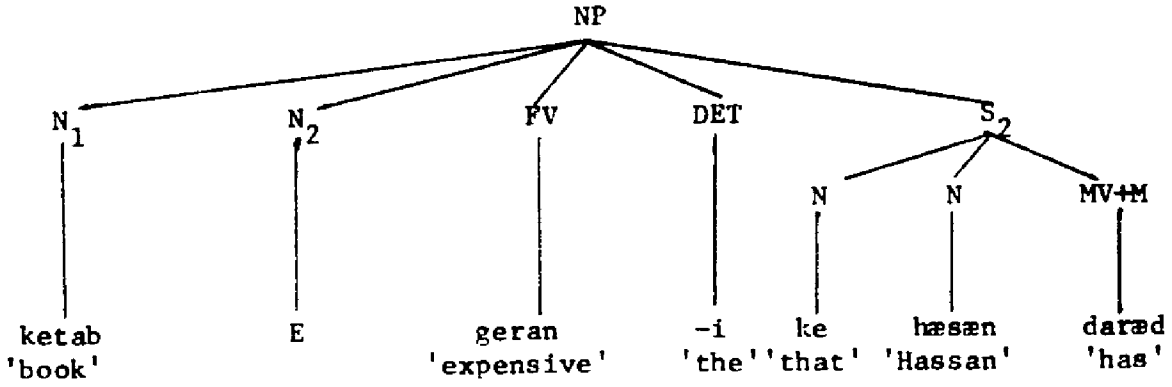
Example (295), containing two ezafes, results when both S_1 and S_2 are fully reduced to E-constructions. S_1 will become an adjectival E-construction through the process illustrated in Chapter 4. The results of S_1 nominalization are shown in (487).[19]

(487)



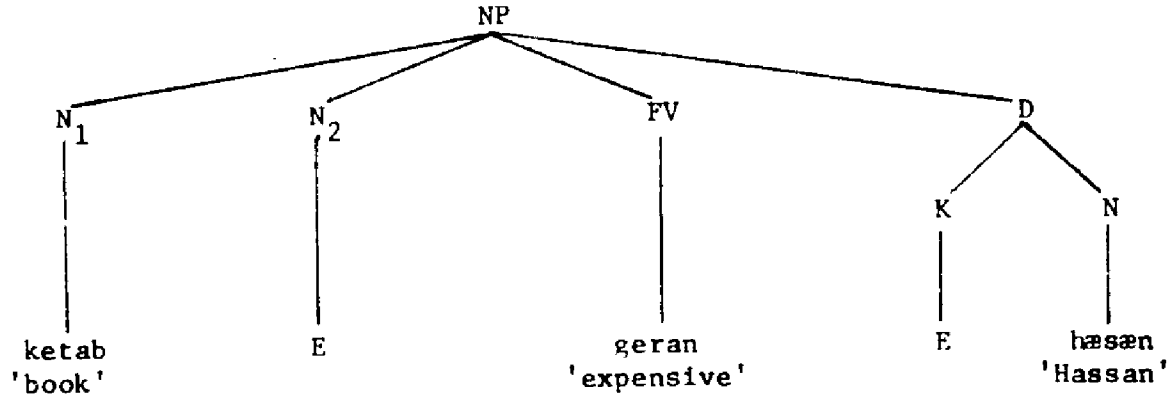
When S_2 is reduced to a relative clause, the result is the structure in (488). The steps in this derivation have also been illustrated in Chapter Four.

(488)



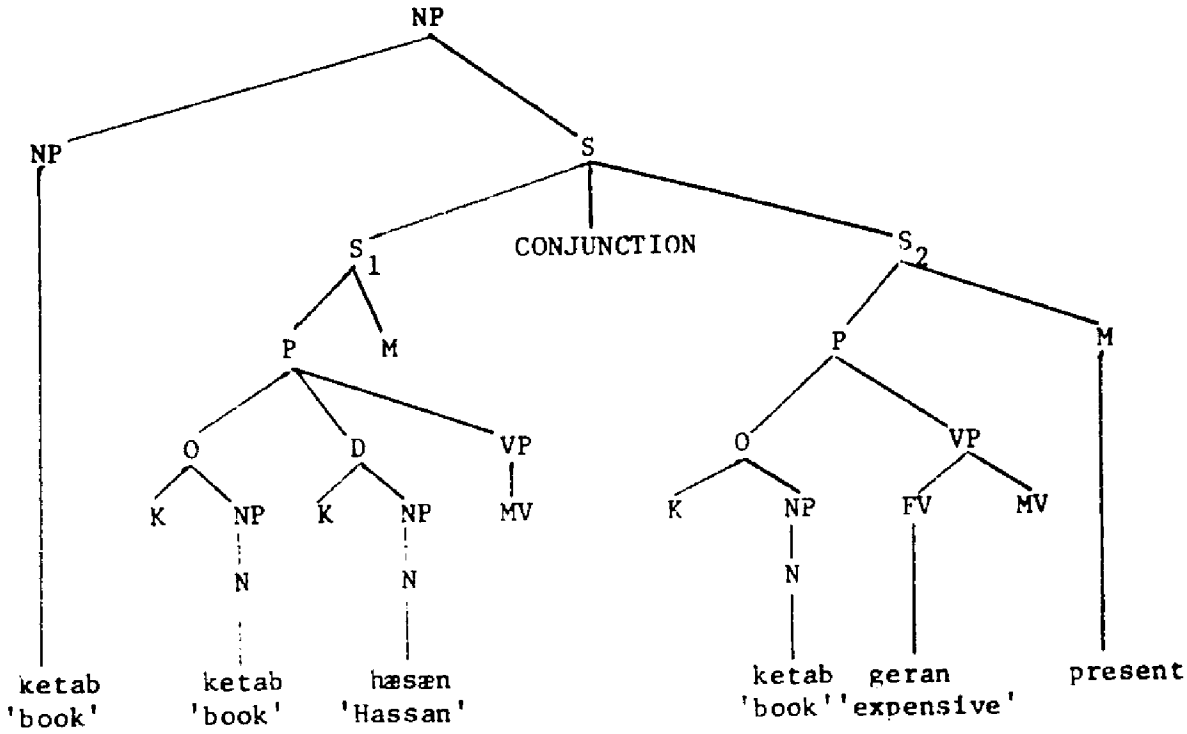
When the relative clause in (488) is also reduced to an E-construction, then (489) is the result. The steps in this derivation are illustrated in (473-476) above.

(489)



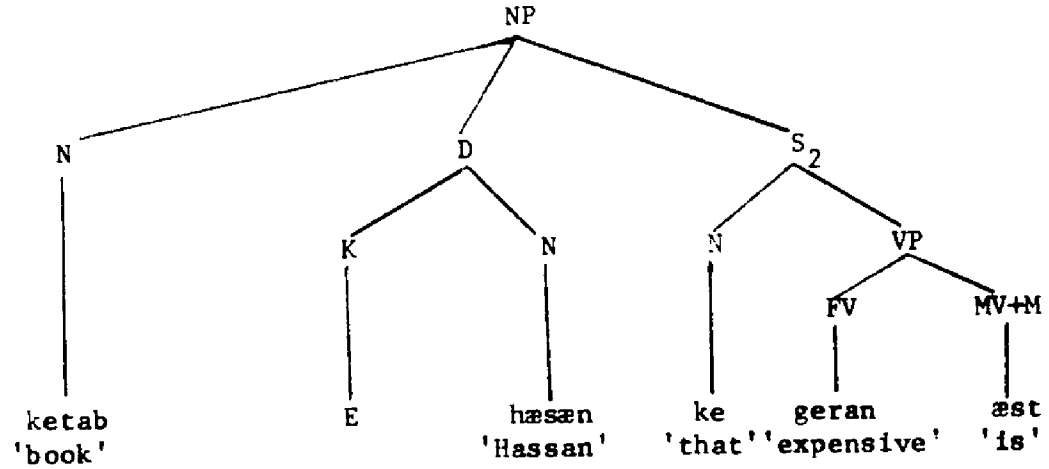
The deep structure underlying (440) is basically the same as that illustrated in (486) except that the order of S_1 and S_2 is reversed.

(490)



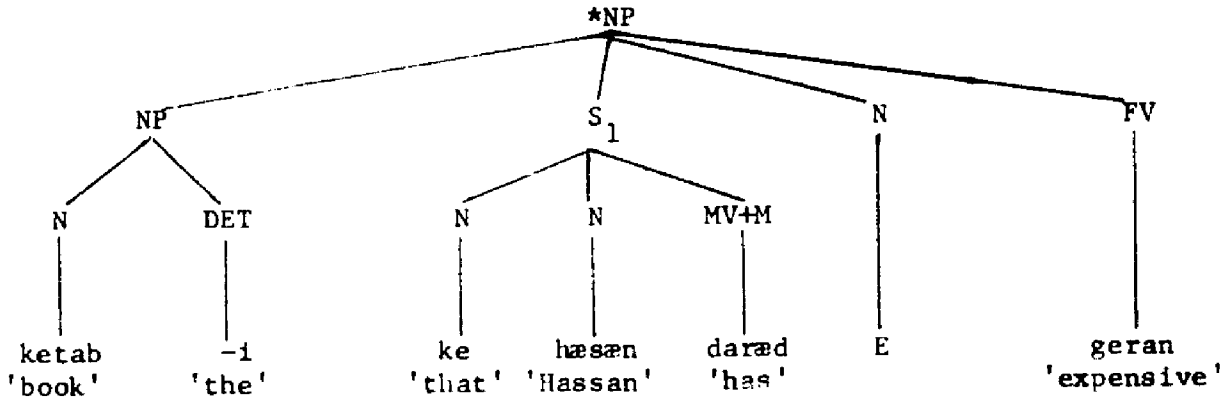
The steps in the derivations of the relative clause under S_2 and the E-construction under S_1 are as shown in Chapter Four and in (473-476). The surface structure of (440) is the following:

(491)



Problems remain unsolved in this analysis. It is unclear how to prevent the first embedded S (S_1 in 490) from being reduced to a relative clause while the S_2 is developed into an E-construction. If this took place, then the following incorrect construction would result:

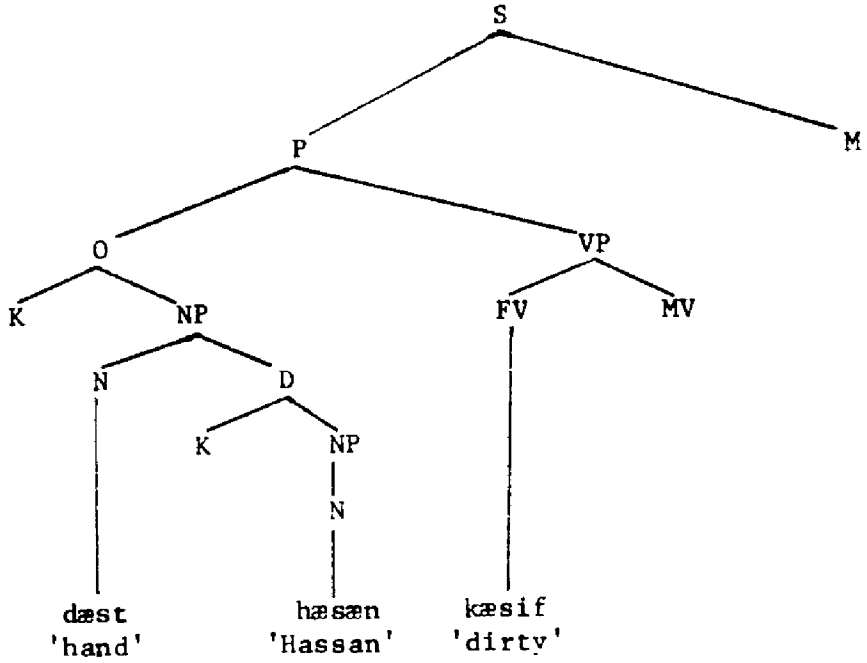
(492)



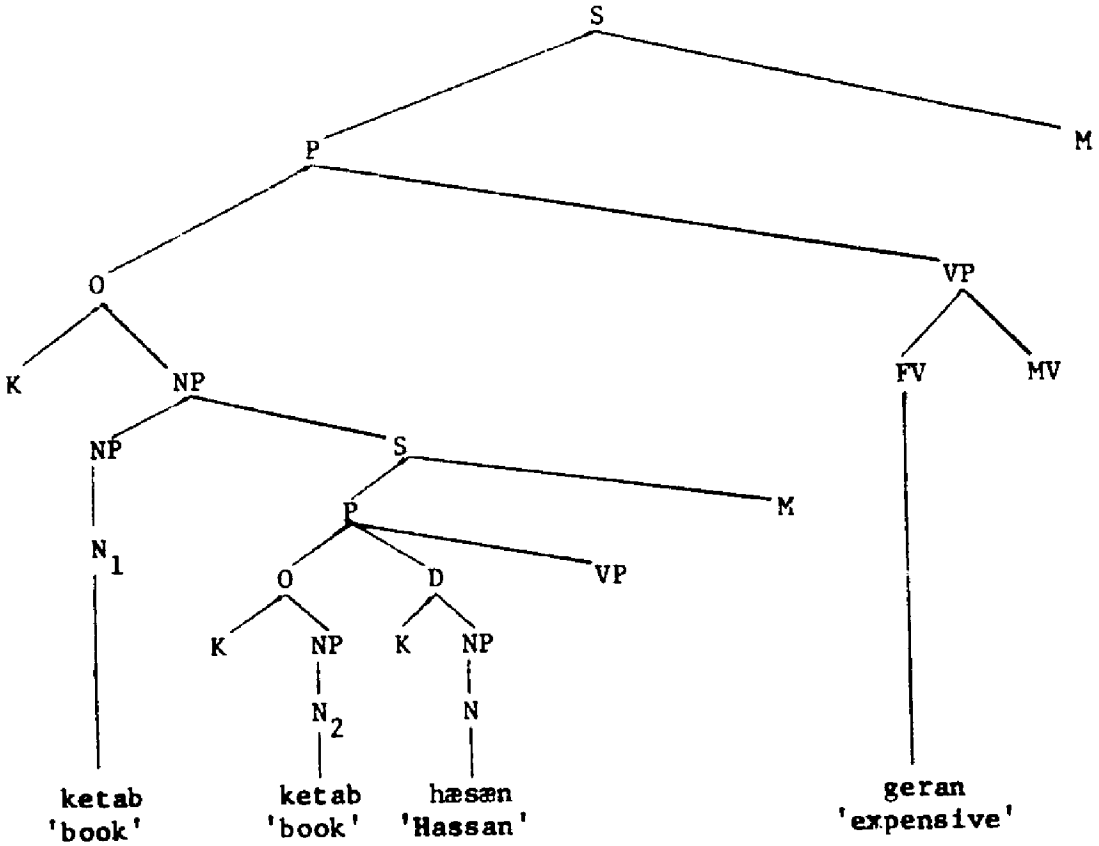
Perhaps there is a general principle that a second stage (E-construction) nominalization cannot follow a first stage (relative clause) nominalization. This problem requires further study.

6.2.5 The surface structures of examples (441) and (443) are parallel, and their deep structures differ only in that the NP /dæst-E-hæsæn/ 'Hassan's hand' in (441) is not a reduced relative clause, whereas the NP in (443) /ketab-E-hæsæn/ 'Hassan's book' is. The steps in the derivations of surface structures from deep structures such as (493) and (494) below have already been illustrated and need not be repeated. (493) gives the deep structure of (441), and (494) gives the deep structure of (443).

(493)

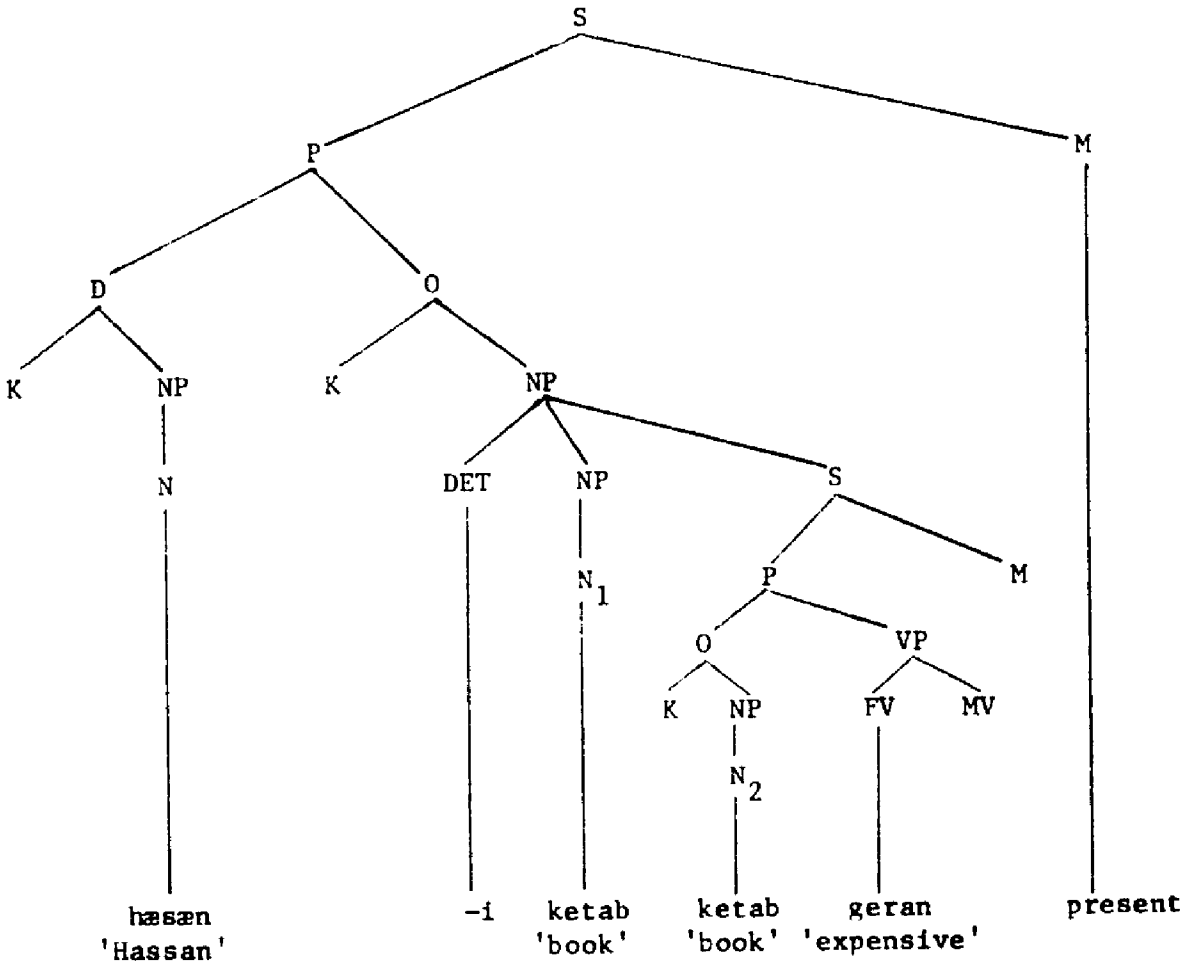

S
P
M
O
VP
K
NP
FV
MV
N
D
K
NP
N
dæst
'hand'
hæsæn
'Hassan'
kæsif
'dirty'

(494)

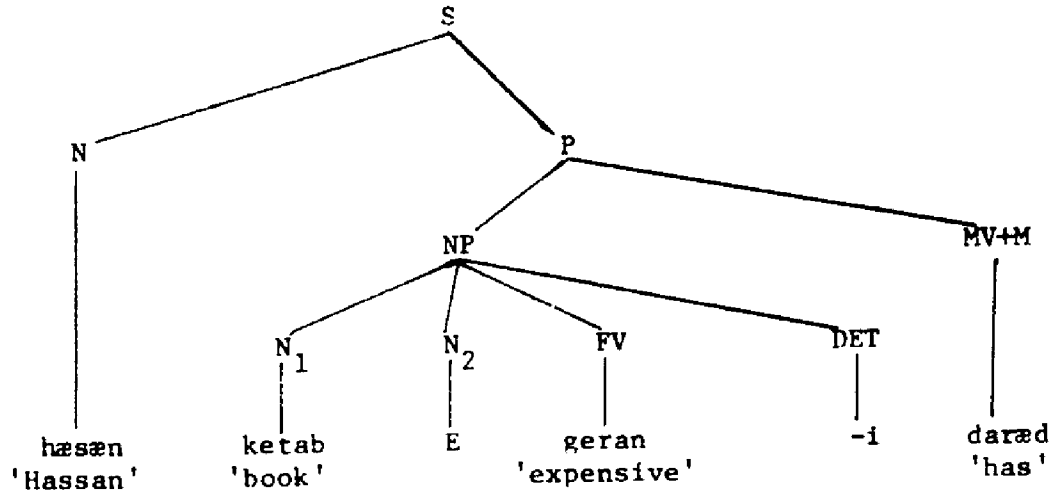

S
P
M
O
VP
K
NP
FV
MV
NP
S
N1
P
M
O
D
VP
K
NP
K
NP
N2
N
ketab
'book'
ketab
'book'
hæsæn
'Hassan'
geran
'expensive'

Examples (442) and (444) have quite different deep structures. The derivation of (444) requires only that the O NP be converted into an E-construction and that the D NP be raised to the subject position. The deep structure of (444) is given in (495). and the surface structure is given in (496).

(495)

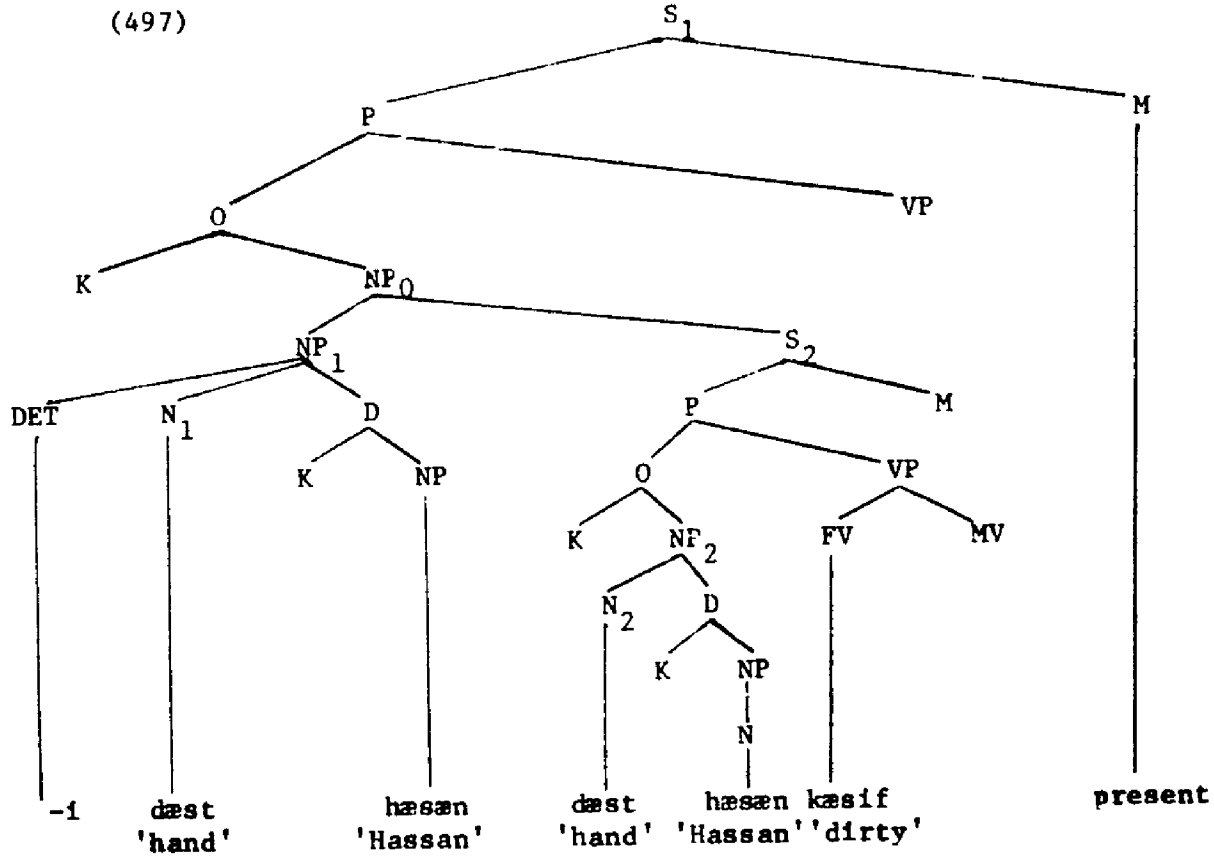


(496)



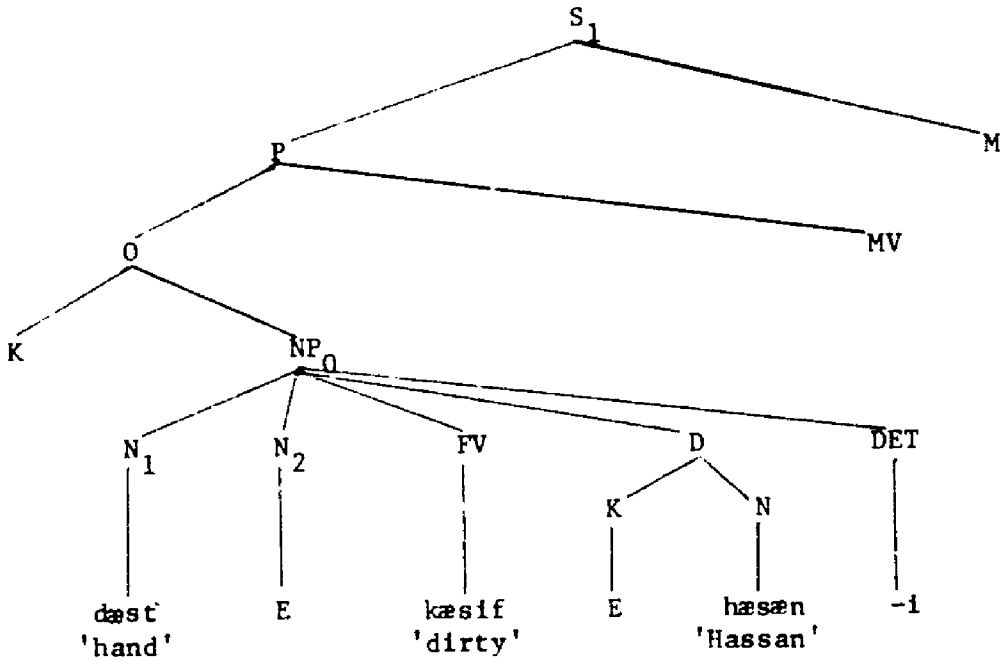
The derivation of (442) is interesting because it illustrates the cyclical application of the transformational rules. Its deep structure is the following:

(497)



The lowest embedded S (S_2) must first be reduced to an E-construction. This requires the application of T-1, T-5, T-11, T-12, T-15, and T-16. This has been illustrated above, (482-485). The result after applying the transformations is the following structure.

(498)



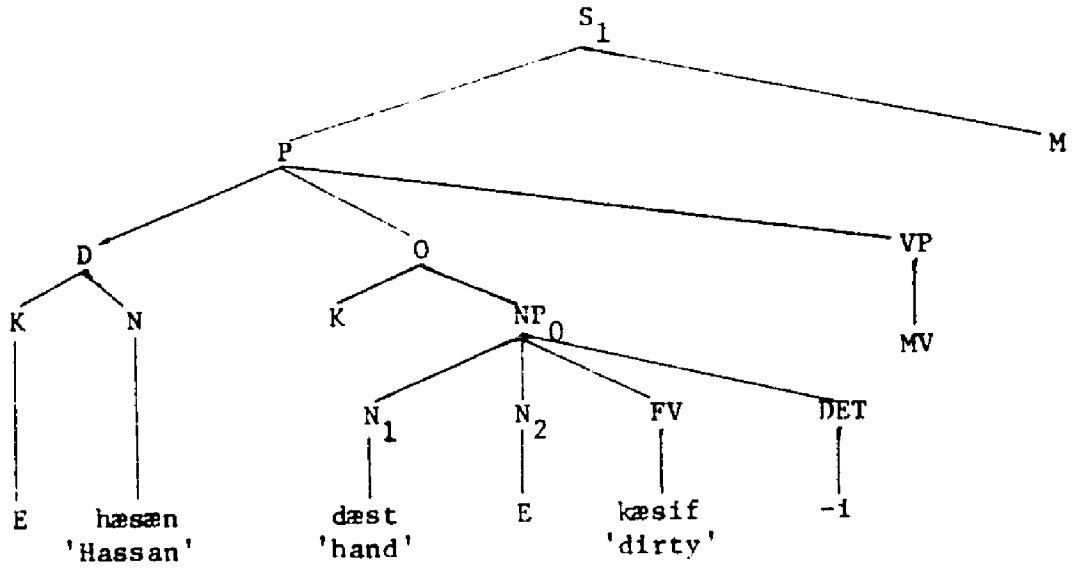
A transformational rule is required to raise the D NP from under NP_0 and attach it directly to the P of S_1.[20] There is some reason to believe that this rule should be numbered T-18, and therefore succeed T-1 through T-17. If D raising preceded the rest of the transformational rules, then it would lift both D NPs which are under NP_0 in (497) and attach them directly to the P of S_1. The result is that a proposition contains two identical CASES. Fillmore's thesis excludes the possibility of such a proposition.[21]

If the remaining transformations apply before D raising, however, the identical NP (NP_2) will be eliminated. This is illustrated in the

conversion of (480) to (481) above. If D raising applies at this point, only the one remaining D NP will be raised.

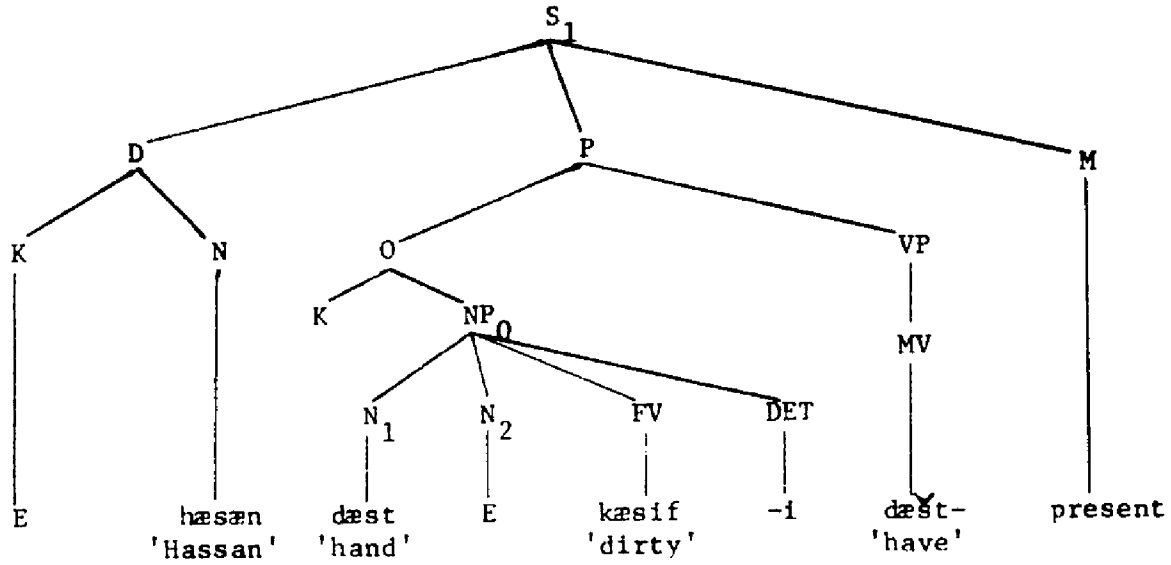
Another possibility is to require D raising prior to T-1 (subject raising). The case for this ordering will be made later.[22] Now I will show D raising when it is assumed to be the final transformational rule (T-18). T-18 applied to (498) produces the following structure.

(499)



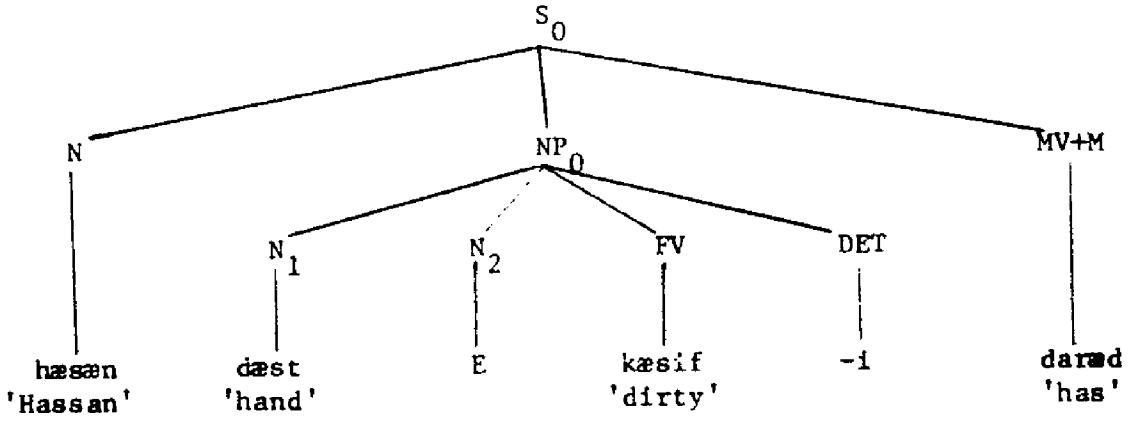
The P under S_1 now has two CASES (D and O). T-1 (subject raising) reapplies, raising the D CASE to the subject position and introducing /dašt-/ into the empty MV constituent. The resulting tree structure is the following:

(500)



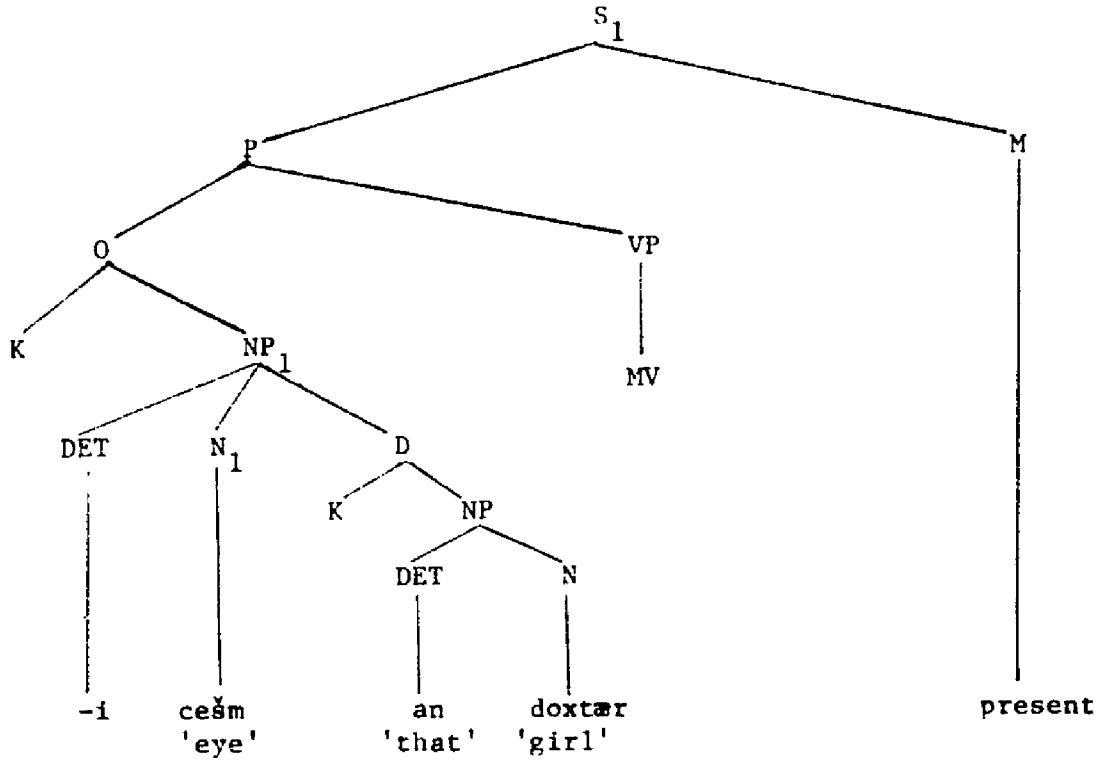
T-16 (structure reduction) and T-17 (final rules) convert (500) into a surface structure. The ezafe which marks the surface subject must be deleted since the surface subject of a non-embedded sentence is never marked either with a preposition or with the ezafe.

(501)

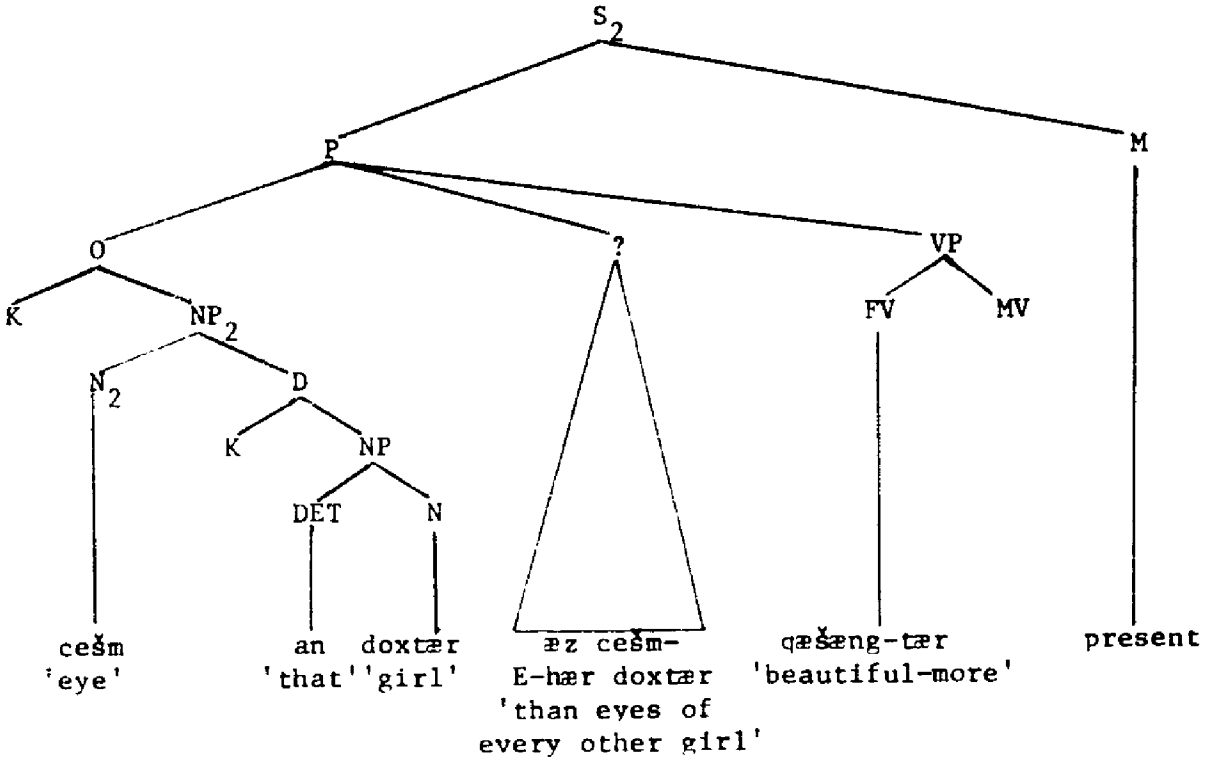


6.2.6 The derivation of a construction similar to (445) has already been given.[23] (446) differs from (445) in that the head noun in (446) is inalienably possessed. The structure of the DS of (446) is not at all clear. I can only suggest a very tentative tree structure, part of which is left unspecified (this part is marked with a question mark). The two conjoined sentences in the DS of (446) are diagrammed separately in (502) and (503) below.[24]

(502)

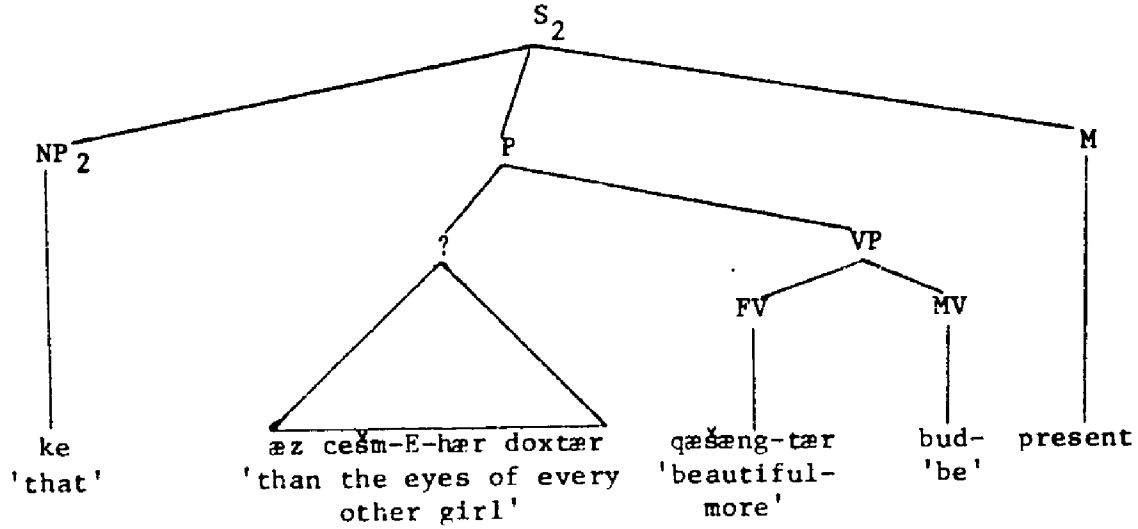


(503)



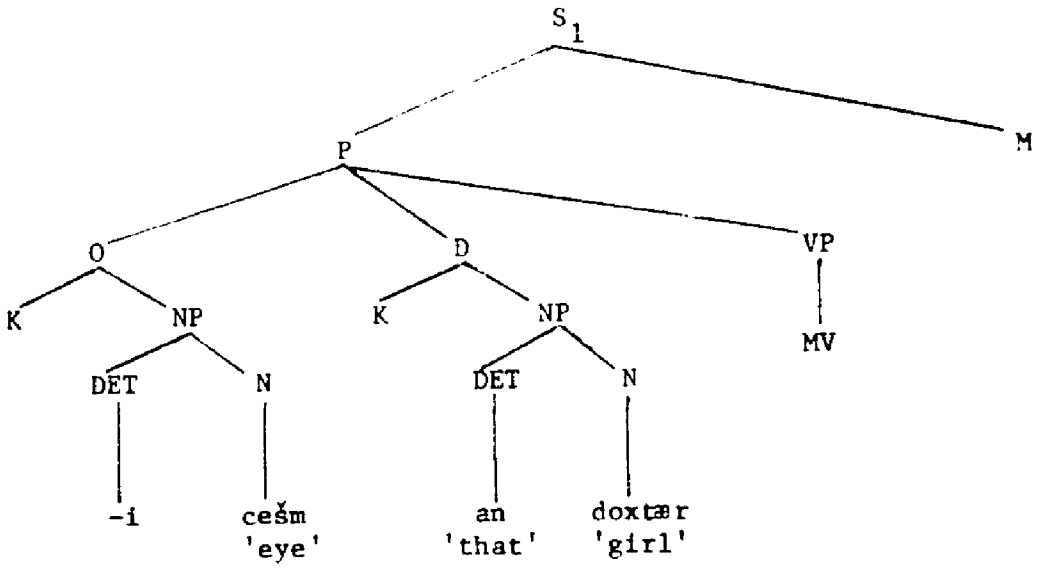
The entire NP /cešm-E-andoxtær/ in (503) is identical to a NP in S_1 (502). It is identical, however, only before the application of the transformational rules to S_1, which include the raising of the D NP. This suggests that the nominalization transformations apply to S_2 prior to S_1 in conjoined sentences. T-1 (subject raising) and T-3 (/ke/ introduction) in S_2 are shown in (504).

(504)



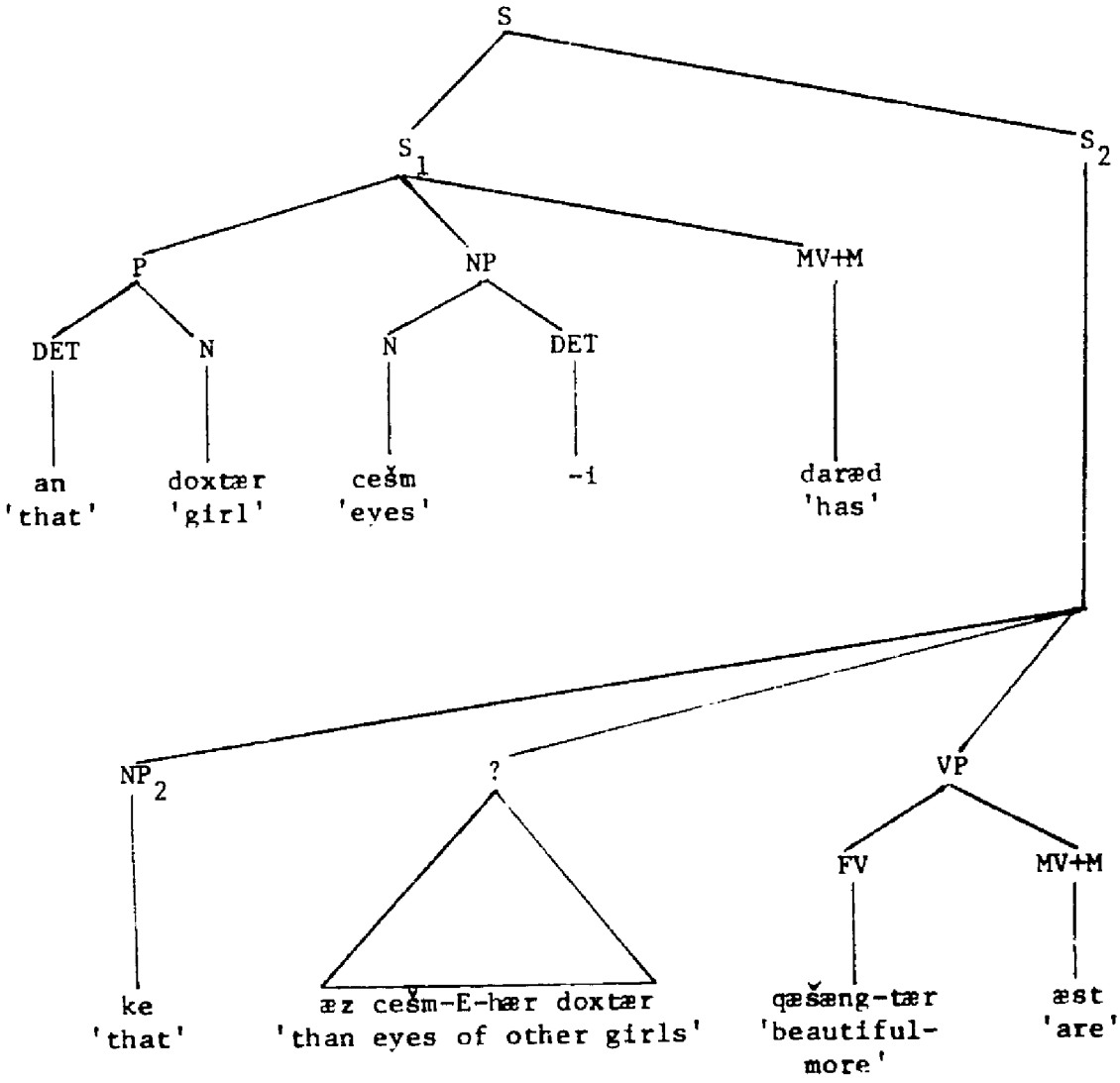
T-18 (D raising) in S_1 is shown in (505).

(505)



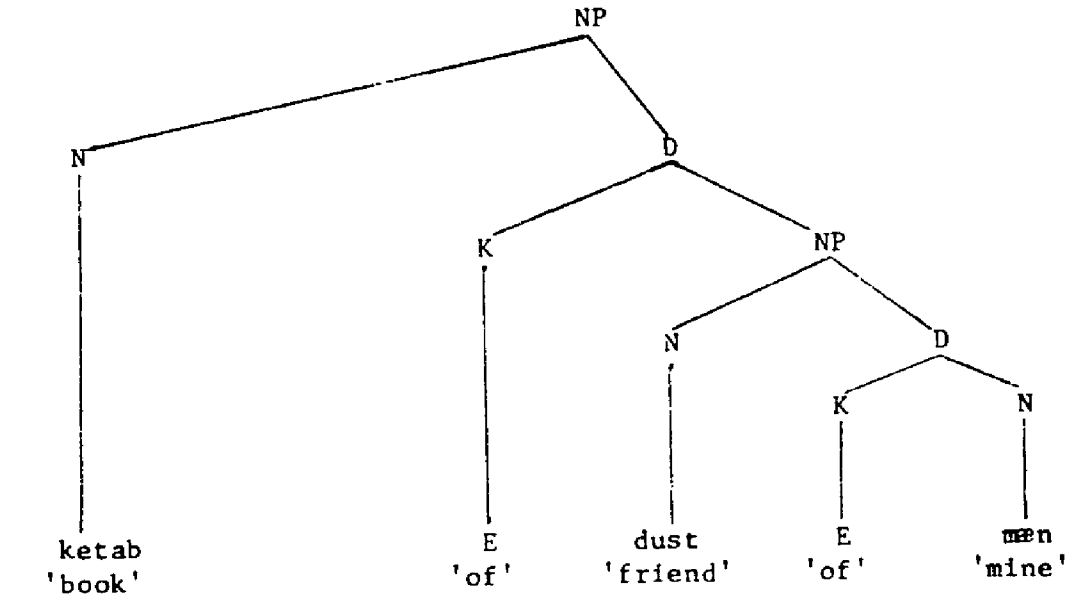
The transformational rules, starting with T-1 (subject raising) apply again in S_1. The final surface structure of (446) is given in the following tree diagram.[25]

(506)

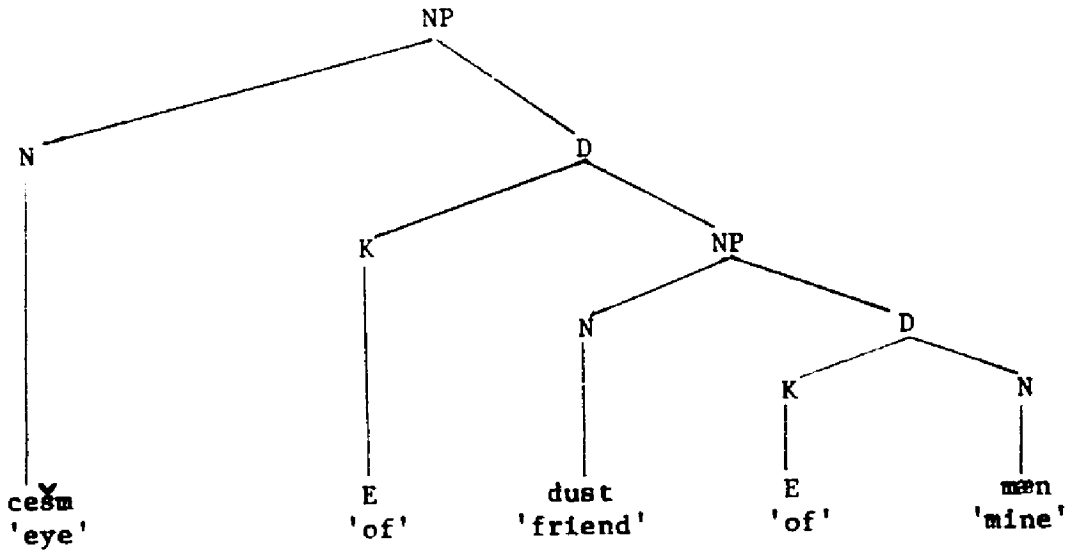


6.2.7 The examples in 6.1.7 occur as the result of additional nominalization within the NP which dominates the possessor noun. Therefore, instead of the possessor consisting of a single noun, it consists of an E-construction. The surface structures of (447) and (448) are given in (507) and (508).

(507)

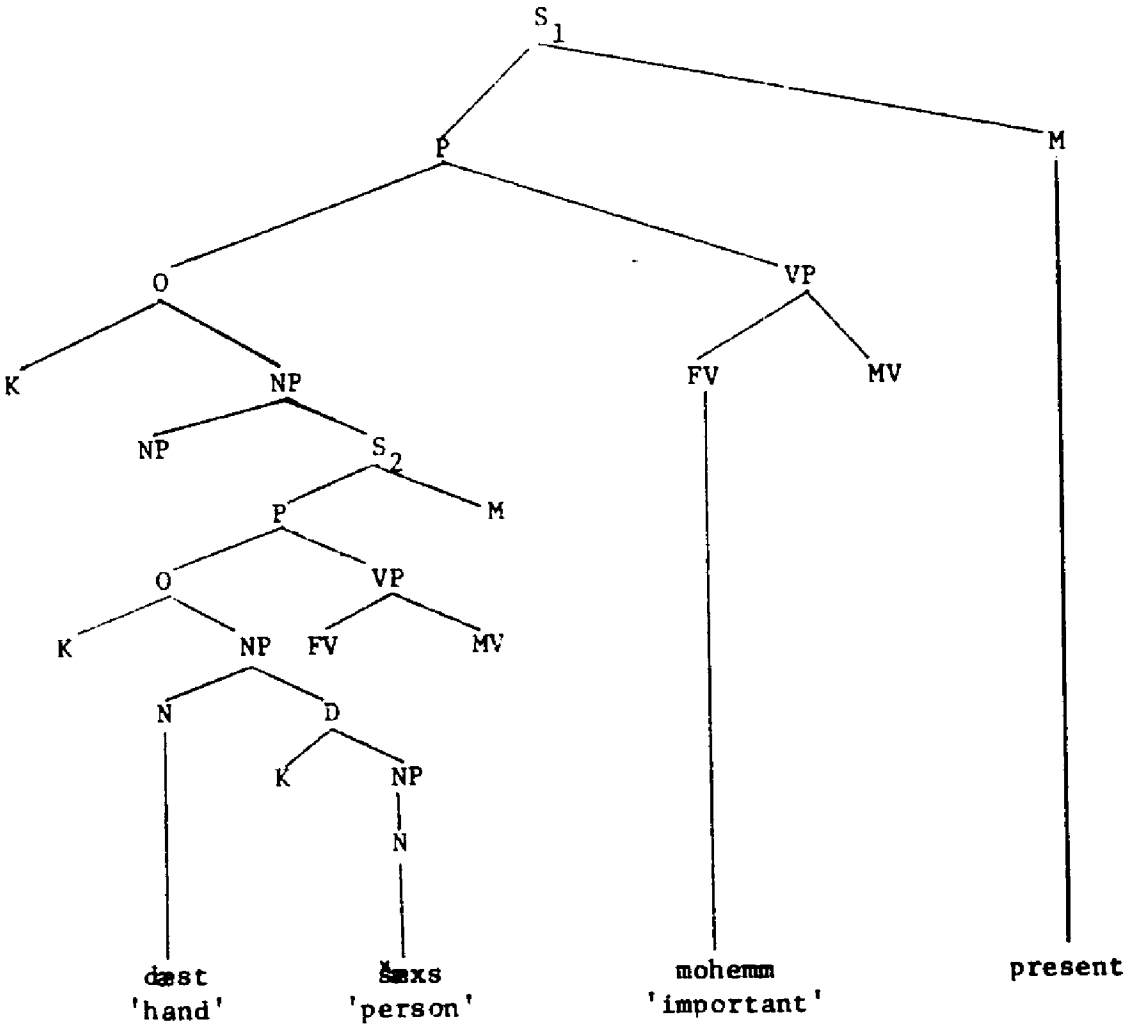


(508)



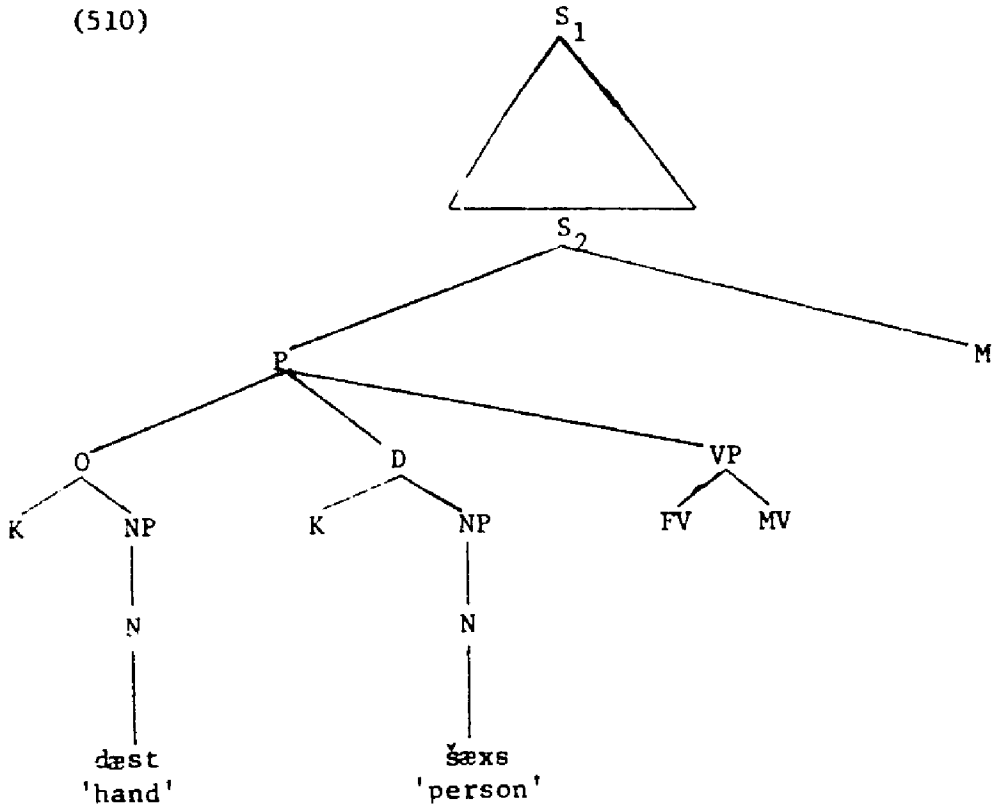
6.2.8 The examples in 6.1.8 occur as the result of the O NP, which contains /pul/ 'money' or /dæst/ 'hand' in the examples, being moved into the VP by T-7 (fore-verb creation). The requirement for (449) and (451) is that the O NP not contain a D NP in the surface structure, even though the head of the O NP is an inalienably possessed noun. The DS of (449) is illustrated in the following diagram.

(509)



T-18 (D raising) provides the proper intermediate structure for T-10 (fore-verb creation) by raising the D NP into the proposition. This frees the O NP so that it can be moved into the VP as a created fore-verb. T-18 is illustrated in (510). Only the structure of S_2 is shown.

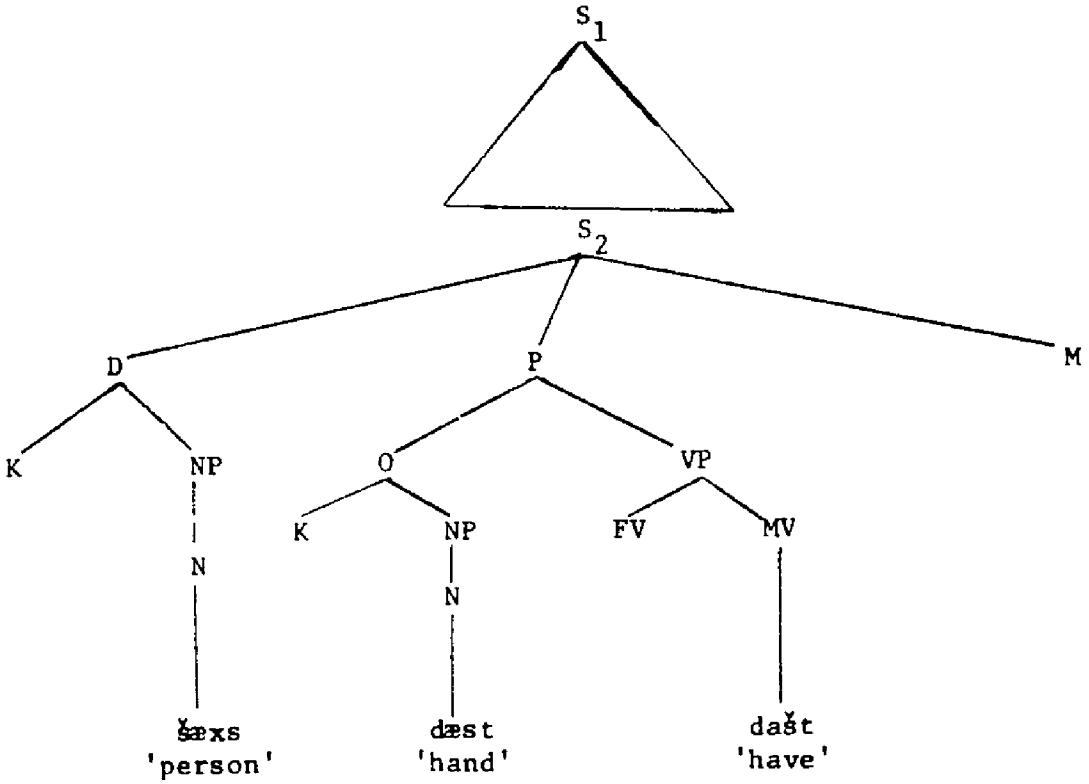
(510)



The example of T-18 (D raising) just shown contradicts the above argument that D raising should occur after the other T-rules that I have given.[26] In the previous examples, D raising occurred in an embedded sentence in which all of the transformational rules were required before D raising. In the S_2 constituent as shown in (510), D-raising must occur before any of the other transformations, such as subject raising, have applied. This is because the subject raising transformation must raise

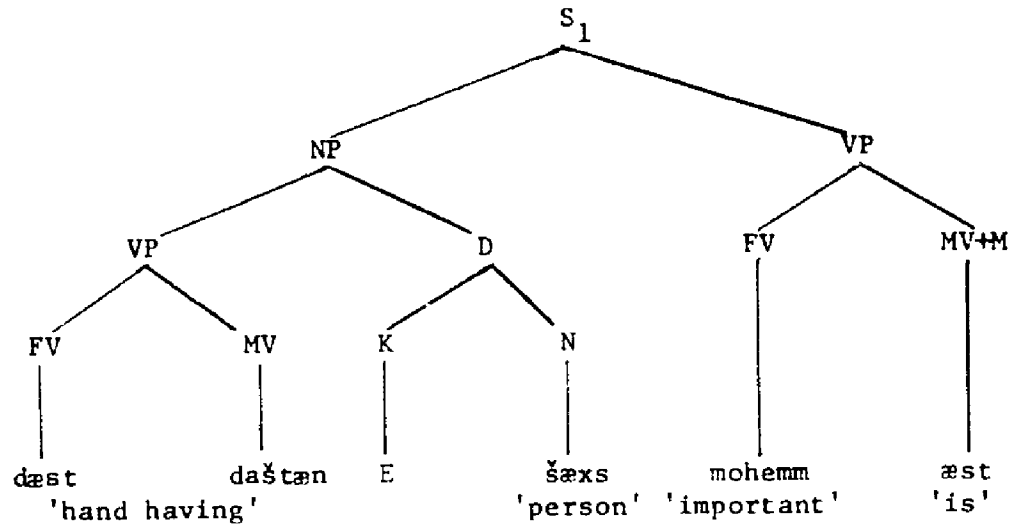
the D NP from the proposition to the subject position, and the D NP is moved into the proposition by D raising. If the structure of S_2 is transformed in this way, then T-1 (subject raising) applies after T-18, and the result is (511).

(511)



The remainder of the derivation of (449) parallels the derivations shown in Chapter Five, as do the derivations of the remaining examples in 6.1.8. The surface structure of (449) is given below.

(512)


S1
NP
VP
VP
D
FV
MV+M
FV
MV
K
N
dæst
daštæn
E
šæxs
mohemm
æst
'hand having'
'person'
'important'
'is'

FOOTNOTES

CHAPTER SIX

[1]This is also true of English as shown by Fillmore 1968, pp. 61-81.

[2]Cf. Section 4.2.

[3]Some Persian speakers will not accept example (449).

[4]There is no rule T-13 in this analysis. There was reason to believe at an earlier stage in this study that T-18 should be numbered as T-13.

[5]Although T-18 follows the "final" rules in this list, it is not clear exactly where this rule should apply. Cf. p. 154 and p. 163 for discussions of this problem.

[6]Cf. 3.4.3.

[7]Cf. 3.4.4.

[8]Cf. Section 2.3.1 for the definition of the dative CASE.

[9]Although Fillmore suggests the structure shown in (461) for inalienably possessed nouns, he does not point out that this structure blocks the use of a restrictive relative clause with such nouns.

[10]Cf. Section 4.2.

[11]The subject raising transformation might be used to predict the insertion of the MV /bud-/ in structures su. as (464). If this were the case, then /mal-/ would be structurally equivalent to adjectives which are interpreted as fore-verbs without marked main-verbs.

[12]Cf. 3.4.3.

[13]Cf. (286-295).

[14]Cf. (308).

[15]Cf. (310).

[16]Cf. Fillmore 1968, pp. 75-80, for a completely different analysis of similar constructions in English.

[17]Cf. Chapter Four, p. 77.

[18]Cf. (292).

[19]Cf. Section 4.5.

[20]Fillmore 1968, p. 77, indicates that such a rule is also required for other languages, including English.

[21]Fillmore 1968, p. 24.

[22]Cf. pp. 163-164.

[23]Cf. Section 4.3.2.

[24]The argument for conjoined sentences in the deep structure of constructions such as (446) is given in Section 4.3.

[25]I do not know how one accounts for the determiner of /cešm/ in S_1. If the determiner is present in NP_1 in the deep structure,

then it must also be present in NP_2 if NP_2 is really identical to NP_1. I can, however, see no independent justification for including a determiner in the deep structure of NP_2.

[26]Cf. p. 154.

CONCLUSION

The E-constructions analyzed in this study are those which can be consistently paraphrased by other constructions, such as relative clauses or sentences. The common features of the parallel constructions are explained by their deep structures. Transformational rules define the differences in form and syntax which occur in the surface structures. I have discussed those deep structures and transformational rules which are necessary to account for the occurrence of semantically equivalent constructions.

The foundation for my analysis of the E-construction is the set of rules which specify the phrase structure of the deep structure of MSP. Alternative possibilities are raised and rejected as either not properly accounting for certain facts in the Persian language, or as being incompatable with the constraints on the form of phrase structure rules.

One of the constituents of MSP deep structure is the verb phrase. As defined in this thesis, the verb phrase contains either one or two constituents. These are an obligatory main verb and an optional fore-verb. The fore-verb is the class of pre-verbal particles,[1] nouns, and adjectives which function in close syntactic unity with the main verb. Words introduced under the fore-verb constituent are shown to have syntactic properties distinct from those introduced outside of the verb phrase. The fore-verb constituent figures predominantly in every type of E-construction treated in this study.

The deep structure constituent under which all E-constructions, with one exception, are derived, is the noun phrase. The noun phrase is not a part of the verb phrase, either in deep or in surface structure. The relationship between the noun phrase and the verb phrase is defined by the CASE of the former. Using Fillmore's theory of CASE, I showed that each verb-phrase in MSP must be marked to specify the particular set of CASES with which it occurs in deep structure. Furthermore, knowing these CASES one can predict the alternative subject/object/complement possibilities in the surface structure of MSP. Also, the occurrence of the main verbs /bud-/'be' and /dašt-/ 'have' is predicted from the deep structure.

Common to all but two types of E-constructions in this study is a sentence embedded in a NP in the deep structure. The nominalization process, which converts an embedded sentence into a relative clause, and a relative clause into an E-construction, involves two types of structure reduction. An embedded sentence is converted into a relative clause by pronominalization. A relative clause is converted into an E-construction by the deletion of the main verb and the constituent M which contains tense, aspect, and mood information. Thus in the following examples, the relative clause contains a pronoun /ke/ 'that' where the sentence contains a noun /ketab/ 'book'. The E-construction contains no main verb, whereas the relative clause and the sentence contain the main verb /daræd/ 'has'.

(513) hæsæn ketab-ra daræd 'Hassan has the book.'

(514) (ketab-i) ke hæsæn daræd '(the book) that Hassan has'

(515) ketab-E-hæsæn 'Hassan's book'

The two verbs deleted from the relative clause to form the E-construction are the copula /bud-/ (including its passive form /šod-/) and the verb /dašt-/ 'have'. These are also the two verbs which are not present in the deep structure, but are introduced into surface structure as the result of subject creation. Since the subject creation rules depend upon the labels of the CASES in the deep structure, it is really the CASES which determine the introduction of /bud-/ and /dašt-/.

There are basically two contrastive types of structure reduction which produce E-constructions. When the embedded sentence contains a non-predictable verb, the verb is changed to a nominal (infinitive) form which becomes the head of the E-construction. When the embedded sentence contains no main verb in deep structure and, therefore, neither of the two predictable verbs in the surface structure, the MV constituent is deleted. This is illustrated in the following examples. In (516) the main verb is not predictable, and converting (516) into an E-construction gives (517). In (518) and (519) the main verbs are predictable. They are deleted in the corresponding E-constructions (520) and (521).

(516) kesi šir-ra košt 'Someone killed the lion.'

(517) koštæn-E-šir 'killing the lion'

(518) an doxtær qæšæng æst 'That girl is beautiful.'

(519) an doxtær ketab-ra daræd 'That girl has the book.'

(520) doxtær-E-qæšæng 'the beautiful girl'

(521) ketab-E-doxtær 'the girl's book'

Grammars do not explain why people speak or understand language the way that they do; nor do grammars account for the thought processes

which underlie speech. A grammar should, however, make generalizations which, within the structure of the grammatical theory, account for what we observe in language data.

The data suggests that Noun-E-Noun constructions can be paraphrased with either /bud-/ or /dašt/, or both, but not with other verbs such as /xærid-/ 'buy' or /did-/ 'see'. For example, if you ask a Persian to paraphrase (522) he will give (523) or (524), but not (525) or (526).

(522) ketab-E-doktor-æm 'the book of my doctor'

(523) doktor-æm ketab-ra daræd 'My doctor has the book.'

(524) ketab mal-E-doktor-æm æst 'The book belongs to my doctor.'

(525) doktor-æm ketab-ra xærid 'My doctor bought the book.'

(526) doktor-æm ketab-ra did 'My doctor saw the book.'

Asked to paraphrase a structure which is open to more than one interpretation, such as (527), Persians will offer the two paraphrases (528) and (529). The verbs supplied again are /bud-/ and /dašt-/, and not regular verbs such as illustrated in (530) and (531).

(527) bæradær-E-doktor-æm 'my brother, the doctor' or 'the brother of my doctor'

(528) bæradær-æm doktor æst 'My brother is a doctor.'

(529) doktor-æm bæradær daræd 'My doctor has a brother.'

(530) bæradær-æm doktor-ra did 'My brother saw the doctor.'

(531) bæradær-æm doktor-ra košt 'My brother killed the doctor.'

It is reasonable that Persians do not give a /bud-/ paraphrase for (522) which has the meaning 'The book is my doctor.', since such

an interpretation would be at odds with all that we know about people and books. In (527), however, when the choice of the lexical items does not rule out either a /bud-/ or a /dašt-/ paraphrase on logical grounds, both are given. The important fact about Persian is that paraphrases of constructions such as (522) and (527) always contain either /bud-/ or /dašt-/ and do not include other main verbs.

In the rules which I have proposed for the derivation of E-constructions, the same restriction on paraphrase relations is made. In essence, my rules say that Noun-E-Noun E-constructions are derived from deep structures which contain no main verb, and that just in this type of deep structure are the verbs /bud-/ or /dašt-/ introduced into the surface structure. No provision is made for the introduction of non-predictable verbs, such as /did-/ 'see' and /košt-/ 'kill'.

My rules also say that when there is any main verb in the deep structure, the only possible ezafe nominalization is one in which the verb is converted into an infinitive and the infinitive becomes the head of the E-construction. Thus, given a deep structure underlying (532), the rules state that the main verb /košt-/ is changed to an infinitive and becomes the head of the related E-construction (533).

(532) hæsæn iræj-ra košt 'Hassan killed Iraj.'

(533) koštæn-E-iræj tævæssote hæsæn 'the killing of Iraj by Hassan'

When one asks a Persian to paraphrase an E-construction such as (533), he does so with a construction such as (532). He does not supply another main verb, such as the following.

(534) hæsæn iræj-ra did 'Hassan saw Iraj.'

(535) hæsæn iræj æst 'Hassan is Iraj.'

The fact that my rules do not provide any way of introducing /bud-/ into the DS of a sentence such as (532) which already contains a main verb means that the rules restrict the derivation of surface structures from deep structures to the same set of constructions which speakers of Persian offer as paraphrases.

I would like to go one step further and offer a hypothesis about the nature of nominalization in communication. Language was created by man for communication. Nominalizations are one set of constructions which are used for communication. The most striking difference between nominalizations and sentences is that nominalizations contain less structure than sentences do. Nominalizations are short ways of referring to concepts which are statable in sentences.

Short, or reduced forms of sentences, to be useful in communication, must not be subject to a large number of interpretations. Otherwise, hearing a nominalization one would have no way of knowing what the relationship is between the constituents of that nominalization. My rules, which only delete two verbs, and which require that all other verbs be kept in the nominalization as infinitives, say within a grammatical theory what seems reasonable within a theory of communication.

In nominalizations containing infinitives, the tense/mood/aspect information is deleted. This information is contained under a single label, M, which is distinct from the main-verb constituent. This makes it possible to delete this information independently of the verb-stem, and accounts for the fact that infinitives do not contain this (tense/aspect/mood) information.

(536) koštæn-E-šir 'killing the tiger'

(537) *bekoštæn-E-šir

(538) *xahæd koštæn-E-šir

(539) *daštæn koštæn-E-šir

(540) *mikoštæn-E-šir

Voice distinctions, however, can be made in the infinitive. The use of the active or passive voice depends upon the CASE of the subject noun phrase. This means that the transformation which creates the subject is part of the set of rules required for nominalizations.

I have shown that in MSP as well as in English there are two types of possession, alienable and inalienable, and I have proposed a test for inalienable possession in terms of paraphrase potential which I believe to be valid for both MSP and English. The restrictions on paraphrase potential of inalienably possessed nouns are predicted from their deep structure.

Finally, two sources are postulated for the ezafe morpheme. One is the relative pronoun /ke/ 'that', and the other is the constituent from which the prepositions are derived. The evidence for setting up these sources is basically one of complementary distribution. I have shown that the ezafe is in complementary distribution with the relative pronoun /ke/ in one set of constructions, and in complementary distribution with the prepositions in another set. Among those prepositions for which complementation with the ezafe is shown are those marking the dative, agentive, and locative CASES.

FOOTNOTES

CONCLUSION

[1]The grammatical category "pre-verb" is defined in Jazayery and Paper 1961, pp. 200-201.

BIBLIOGRAPHY

Boyle, John Andrew. 1966. Grammar of Modern Persian. Wiesbaden: Harrassowitz.

Chomsky, Noam. 1957. Syntactic Structures. The Hague: Mouton.

_____. 1965. Aspects of the Theory of Syntax. Cambridge, Mass.: Massachusetts Institute of Technology Press.

Elwell-Sutton, Laurence P. 1943. Colloquial Persian. London: K. Paul, Trench, Trubner & Co.

_____. 1963. Elementary Persian Grammar. Cambridge, England: University Press.

Faroughy, Abbas. 1944. A Concise Persian Grammar. New York: Orientalia.

Farzan, Massud, Mohammad A. Jazayery, and Herbert H. Paper. 1962. Modern Persian Readers: I. Elementary; II. Intermediate; III. Advanced. Ann Arbor: The University of Michigan Press.

Fillmore, Charles A. 1965. "Entailment Rules in a Semantic Theory." Ohio State University Research Foundation Project on Linguistic Analysis, Report No. 10. Columbus.

_____. 1966. "Toward a Modern Theory of Case." Ohio State University Research Foundation Project on Linguistic Analysis, Report No. 13. Columbus.

_____. 1967. "On the Syntax of Preverbs." Glossa, A Journal of Linguistics, Vol. 1, No. 2.

_____. 1968. "The Case for Case." Universals in Linguistic Theory, ed. by Emmon Bach and Robert Harms, 1-88. New York: Holt, Rinehart and Winston.

Fodor, Jerry A., and Katz, Jerrold J. (eds.). 1964. The Structure of Language: Readings in the Philosophy of Language. Englewood Cliffs, N. J.: Prentice-Hall.

Geiger, Wilhelm, and Ernst Kuhn. 1901. Grundriss der Iranischen philologie. Strassburg: K. J. Trübner.

Hincha, G. 1961. "Beiträge zu einer Morphemlehre des Neupersichen." Der Islam. 37.

Jazayery, Mohammad A., and Herbert H. Paper. 1961. A Reference Grammar of Modern Persian. Ann Arbor. Unpublished.

Jensen, Hans. 1931. Neupersische grammatik. Heidelberg: C. Winter.

Jones, Sir William. 1823. A Grammar of the Persian Language. London: Harding, Mavor, and Lepard.

Katz, Jerrold J., and Paul M. Postal. 1964. An Integrated Theory of Linguistic Description. Cambridge, Mass.: Massachusetts Institute of Technology Press.

Lambton, Ann K. 1957. Persian Grammar. Cambridge, England: University Press.

Lazard, Gilbert. 1957. Grammaire du Persan contemporain. Paris: C. Klincksieck.

_____. 1963. La langue des plus anciens monuments de la prose Persane. Paris: C. Klincksieck.

Lees, Robert B. 1957. Review of Chomsky, Syntactic Structures [1957]. Language 33.375-407.

_____. 1960. The Grammar of English Nominalizations. The Hague: Mouton.

Mo'in, Mohammad. 1962. Ezafa. Tehran.

Moyne, John Abel. 1970. The Structure of Verbal Constructions in Persian. Unpublished doctoral dissertation, Harvard University. Cambridge, Mass.

Paper, Herbert H. 1959. Review of Lazard, Grammaire du Persan contemporain [1957]. Journal of the American Oriental Society 79.31-39.

Phillott, Douglas. 1919. A Higher Persian Grammar. Calcutta.

Pike, Kenneth L. 1967. Language in Relation to a Unified Theory of the Structure of Human Behavior. 2d. rev. ed. The Hague: Mouton.

Rastorgueva, Vera S. 1964. "A Short Sketch of Tajik Grammar." Trans. S. Hill, ed. Herbert H. Paper. International Journal of American Linguistics, Vol. 30. No. 4.

Rosen, Friedfich. 1898. Modern Persian Colloquial Grammar. London: Luzac.

Salemann, Karl G., and Valentin Shukovski. 1898. Persische grammatik. Berlin: H. Reuther.

Seiler, Hansjakob. 1960. Relativsatz, attribut, und apposition. Wiesbaden: O. Harrassowitz.

Shaki, Mansour. 1967. Principles of Persian Bound Phraseology. Prague: Oriental Institute in Academia.